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ABSTRACT

Part I of this report, a resume of the Dayton, Ohio, Early Childhood Education (ECE) Program for 1971, is an evaluation of the program. It includes the extent of the services provided an analysis of the needs of the children by preschool teachers, objectives, the team approach used by the staff including staff make-up and their responsibilities, use of curriculum consultants to guide teachers, use of a special services staff to work with children and teachers, and a health program of prevention and remediation conducted by an ECE nurse, the ECE parent programs, and a general evaluation. Part II is a psychological evaluation of ECE four-year-olds, kindergartners, and first and second graders. Evaluation design, description of tasks, scoring, and results, including the results of the various instruments used, for example, Metropolitan Readiness Test results for kindergartners, the short form Test of Academic Aptitude and Stanford Achievement Test results for first graders, and Sullivan Language Program and Stanford Achievement Test results for second graders, are noted. Part III is a resume of the sensorimotor skills program of the ECE and an analysis of sensorimotor development in ECE centers. Part IV is a resume of the New Visions Museum including the operation of the museum, for example, purposes and fundings, exhibits, tours, etc., and an evaluation of the facility. (JS)

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EARLY CHILDHOOD EDUCATION PROGRAM

ESEA TITLE I, FY 1971

PROJECT REPORTS

Resumes in This Volume:

I. EARLY CHILDHOOD EDUCATION PROGRAM

Special Components of ECE

II. Sensorimotor Skills Program

III. NEW VISIONS, A Children's Museum

IV. Psychological Evaluation

Edited by: Elizabeth M. Lane, Coordinator of Educational Program Evaluation
Division of Research
MANAGEMENT SERVICES DEPARTMENT

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DAYTON PUBLIC SCHOOLS
348 West First Street
Dayton, Ohio 45402

Wayne Carle, Superintendent

Volume 6, Book 1, 1971

EARLY CHILDHOOD EDUCATION
NEW VISIONS

RESUMÉ:

EARLY CHILDHOOD EDUCATION Program, FY 1971

Barbara Schnelle, Coordinator

Division of Research
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EXTENT OF SERVICE PROVIDED BY THE ECE PROGRAM

In its sixth year, the Dayton Early Childhood Education Program offered a pre-kindergarten program of discovery, exploration, and experimentation during 1970-71 to children ranging from two years to six, with a concentration of 4-year-olds. The distribution of age groups in the final month of the program was as follows:

2-year-olds: 34, or 2.6%
3-year-olds: 335, or 25.4%
4-year-olds: 930, or 70.5%
5-year-olds: 18, or 1.4%
6-year-olds: 2, or 0.2%
Total enrollment, final month: 1,319

Over the six-year period, the ECE program, financed chiefly by Title I of the federal Elementary and Secondary Education Act of 1965 has expanded from a pilot program of 4 schools in September 1965 to the operation of 35 sections (or classes) in 26 centers for 1970-1971. This growth is shown in the following table.

TABLE 1
GROWTH OF EARLY CHILDHOOD EDUCATION PROGRAM IN DAYTON, AS A TITLE I ESEA PROJECT
1965 to 1971

Time	Number of Centers	Number of Sections or Classes		Number of Children Served	
		PreK	Kind.	PreK	Kindergarten
September 1965	4	8	...	...	...
March 1966	12	24	...	120	...
1966-1967	26	52	...	1,248	...
1967-1968	20	52	57	1,523	1,577
1968-1969	22	56	57	1,203	1,697
1969-1970	30	56	57	1,269	1,665
1970-1971	26	69	...	1,654	...

During the years when ECE service was given to a number of Dayton kindergartens in schools identified as economically disadvantaged, the ECE program provided for kindergarten teacher aides, for in-service training of teachers and aides, and for other components of the program such as health screening and snacks.

Throughout this period, the ECE staff has emphasized the importance of continuity of learning experiences between the pre-kindergarten level and kindergarten and first grade.

Participation

How do the enrollment figures compare with the projected enrollment figures of the Project Application? *How do they compare with the "Average Daily Membership?"*

These two questions are answered in TABLE 2 for the year 1970-71. The ECE centers are listed in the same priority arrangement as appears in the Project Application, Priority I being considered the group of schools with greatest socio-economic need. Sixteen of the 26 schools, or more than 61%, did enroll a total number of children in excess of the projected enrollment (column d). However, when the Average Daily Membership figures are compared with the projected enrollment, if 95% participation is considered a worthy "Index of Participation", only 7 centers attained or exceeded this ratio of ADM to the projected enrollment. This approximates 27% of the centers in the program.

It is noteworthy that the Priority III group attained a higher Index of Participation than did the Priority II group. The index for the entire ECE program was 67.2, meaning that, during 1970-71, the ECE Program served slightly more than two-thirds of the number envisioned in the *Project Application*.

When the centers' "Index of Total Enrollment", is considered, Priority III schools had a higher index than the other two groups.

TABLE 2

PARTICIPATION OF CHILDREN IN EARLY CHILDHOOD EDUCATION PROGRAM BY PROPORTION OF PROJECTED ENROLLMENT, 1970-1971

ECE Center	Number of Sections	Projected Enroll-ment°	Total Number Enrolled	Index of Total Enrollment	Average Daily Membership	Index of Partici-pation
	A	B	C	D (C ÷ B)	E	F (E ÷ B)
Priority I						
Irving	4	120	81	67.5	63.2	52.7
MacFarlane	4	120	97	80.8	76.4	63.7
Emerson	4	120	95	79.1	62.2	51.8
Louise Troy	4	120	117	97.5	86.5	72.1
Edison	4	120	94	78.3	76.7	63.9
McGuffey	4	80	91	113.7	76.7	95.9*
Children's Serv.	2	20	36	180.0	23.4	117.0*
GROUP TOTAL	26	700	611	87.3	465.1	66.4
Priority II						
Weaver	4	80	90	112.5	70.5	88.1
Huffman	2	120	61	50.8	37.3	31.1
Whittier	2	120	46	38.3	38.1	31.8
Greene	2	90	44	48.9	33.6	37.3
Highview	2	120	50	41.7	37.8	31.5
Hawthorne	1	20	22	110.0	17.4	87.0
Jackson Primary	6	120	145	120.8	119.2	99.3*
Wogaman	2	40	45	112.5	37.7	94.3
Ruskin	2	80	54	67.5	32.2	40.3
Longfellow	2	40	53	132.5	39.5	98.9*
GROUP TOTAL	25	830	610	73.5	463.3	55.8
Priority III						
Jane Addams	2	40	48	120.0	32.2	80.5
McNary	2	40	40	100.0	34.6	86.5
Washington	2	40	45	112.5	38.8	97.0
Westwood	2	40	55	137.5	47.8	119.5*
Franklin	2	40	43	107.5	32.5	81.3
Gardendale	2	40	56	140.0	42.0	105.0*
Drexel	2	40	48	120.0	42.1	105.2*
Van Cleve	2	40	54	135.0	36.8	92.0
Patterson	2	40	44	110.0	35.1	87.8
GROUP TOTAL	18	360	433	120.3	341.9	95.0
ECE PROGRAM	69	1,890	1,654	87.5	1,270.3	67.2

° Dayton City Title I Application, 1970-71

* High Index of Participation

To what extent did the children enrolled in ECE attend the program during the year? The answers are found in TABLE 3. Attendance was kept by a count of the number of half-day sessions attended for each child in each center. Nineteen children, or slightly more than 1%, had a perfect attendance record of 142.

Four categories of attendance were studied, divided as follows:

1) 1 to 35 days, representing .01 to .25 part of a year, up to a quarter of the time the ECE Program was in operation.

2) 36 to 71 days, representing .26 to .50 part of a year, between a fourth and half the time of the program's operation.

3) 72 to 106 days, representing .51 to .75 part of a year, the time attended not exceeding three-fourths of the days in session.

4) 107 to 142 days, representing from .76 of a year to perfect attendance of 142 days.

Eleven centers approached or exceeded 50% of the enrollees being in attendance more than three-fourths of the time the program was in operation, the highest record being attained by Westwood with 76%, followed by Washington 71%, Drexel 69%, and McNary 60%. Six of the 9 centers in the Priority III group reached this level of attendance, giving a group total of 54%, in contrast to 37% and 39% for Priority Groups I and II, respectively.

Using the test for significance of a proportion, it was determined that 39% of a group of 610 children attaining this level of attendance was significantly different than 54% reaching it. Therefore, on the basis of the attendance of the individual children involved, the individuals of the Priority III group supposedly had, on the average, a significantly higher benefit than either of the other two groups, when attendance alone was considered. For the program as a whole, 42% of the enrollees were in attendance more than three-fourths of the possible days. When the third and fourth categories of attendance are combined, it is found that 67% of Priority II were present more than half the total days, in contrast to 77% of Priority III, also a significantly different proportion.

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TABLE 3
PARTICIPATION OF CHILDREN IN EARLY CHILDHOOD EDUCATION PROGRAM BY PART OF YEAR ATTENDED, 1970-1971

ECE Center	Total Number Enrolled	Part of Program Year Actually Attended							
		.01-.25	.26-.50	.51-.75	.76-1.00	.01-.25	.26-.50	.51-.75	.76-1.00
		Number of Children				Per Cent of Enrollment			
Priority I									
Irving	81	16	19	17	29	20%	23%	21%	36%
MacFarlane	97	15	11	24	47	15%	11%	25%	49%*
Emerson	95	23	25	19	28	24%	26%	20%	30%
Louise Troy	117	26	22	35	34	22%	19%	30%	29%
Edison	94	30	29	12	23	32%	31%	13%	24%
McGuffey	91	10	13	20	48	11%	14%	22%	53%*
Children's Serv.	36	9	5	8	14	25%	14%	22%	39%
GROUP TOTAL	611	129	124	135	223	21%	20%	22%	37%
Priority II									
Weaver	90	15	11	27	37	17%	12%	30%	41%
Huffman	61	21	8	15	17	34%	13%	25%	28%
Whittier	46	1	6	19	20	2%	13%	41%	44%*
Greene	44	7	6	12	19	16%	14%	27%	43%
Highview	50	8	3	10	29	16%	6%	20%	58%*
Hawthorne	22	3	6	6	7	14%	27%	27%	32%
Jackson Primary	145	22	19	45	59	15%	13%	31%	41%
Wogaman	45	2	8	11	24	4%	18%	25%	53%*
Ruskin	54	20	10	10	14	37%	18%	18%	26%
Longfellow	53	6	18	14	15	34%	26%	28%	19%
GROUP TOTAL	610	105	95	169	241	17%	16%	28%	39%
Priority III									
Jane Addams	48	11	7	13	17	23%	15%	27%	35%
McNary	40	3	3	10	24	7%	7%	25%	60%*
Washington	45	3	4	6	32	7%	9%	13%	71%*
Westwood	55	5	1	7	42	9%	2%	13%	76%*
Franklin	43	4	2	24	13	9%	5%	56%	30%
Gardendale	56	4	10	13	29	7%	18%	23%	52%*
Drexel	48	4	1	10	33	8%	2%	21%	69%*
Van Cleve	54	11	11	8	24	20%	20%	15%	44%
Patterson	44	8	5	10	21	18%	11%	23%	48%*
GROUP TOTAL	433	53	44	101	235	12%	10%	23%	54%
ECE PROGRAM TOTAL	1,654	287	263	405	699	17%	16%	24%	42%

* Centers with highest level of participation by attendance during the major part of the school year.

Attendance is, of course, affected not only by illness and other factors causing children to miss sessions, but by the number of withdrawals of children enrolled in the program.

What are the reasons for withdrawals from the ECE Program during the year? For the program as a whole, 197 children, or 12%, moved away from a school district having an ECE center. Twenty-one children, slightly more than 1%, transferred to kindergarten or to another nursery school. A total of 117 children, or 7%, withdrew for reasons of transportation, family problems, lack of interest on part of parent or child, and health. Tabulation of these withdrawal reasons by ECE centers and priority groups may be found in TABLE 4.

Again, possible benefit from the ECE Program appears to be in inverse order to the priority groups. Priority I had a withdrawal rate of 24%, Priority II 19%, and Priority III 16%. When the test for significance was made for each pair of percentages, the following results were obtained:

1) Between 24% and 19%: $z = 2.91$, significantly different.

2) Between 24% and 16%: $z = 4.71$, significantly different.

3) Between 19% and 16%: $z = 1.88$, not significantly different at .05 level. The advantage of significantly fewer withdrawals is, therefore, held by the Priority III group. The difference between Priority Groups II and III could be due to chance.

Perhaps these withdrawal rates should be kept in mind as new class groups are organized in the fall. The range of withdrawal rates for individual schools was from 7% to 41%, with an average of 20% for the program as a whole. If ECE classes could be organized with groups of 28 to 30 in the beginning, then the normal absences plus a fairly large withdrawal rate would still leave workable groups of 20 or more for the teachers and their aides to work with on a daily basis.

TABLE 4
REASONS FOR WITHDRAWAL FROM ECE CENTERS DURING THE 1970-1971 SCHOOL YEAR

ECE Center	Moved	Transportation	Family Problems	Lack of Interest	Health	Transferred to Kdg. or N.S.	Total Withdrawals	
							No.	% of Enrollment
Priority I								
Irving	16	3	0	2	1	0	22	27%
MacFarlane	11	0	1	2	0	1	15	15%
Emerson	9	4	3	8	2	2	28	29%
Louise Troy	12	3	5	4	0	6	30	26%
Edison	15	2	1	4	2	2	26	28%
McGuffey	10	1	0	3	0	0	14	15%
Children's Serv.	8	0	0	5	0	0	13	36%
GROUP TOTAL	81	13	10	28	5	11	148	24%
Priority II								
Weaver	10	0	1	3	0	1	15	17%
Huffman	11	3	1	1	0	1	17	28%
Whittier	3	0	0	0	0	0	3	7%
Greene	2	1	0	5	0	1	9	20%
Highview	5	1	0	2	0	0	8	16%
Hawthorne	7	0	0	0	0	0	7	32%
Jackson Primary	16	1	0	4	1	0	22	15%
Wogaman	3	0	0	0	0	1	4	9%
Ruskin	9	6	3	2	2	0	22	41%
Longfellow	6	2	2	0	0	0	10	19%
GROUP TOTAL	72	14	7	17	3	4	117	19%
Priority III								
Jane Addams	4	1	1	4	0	1	11	23%
McNary	4	0	0	0	0	0	4	10%
Washington	3	0	1	1	0	1	6	13%
Westwood	2	0	0	1	2	1	6	11%
Franklin	7	0	0	1	0	0	8	19%
Gardendale	4	1	0	1	0	0	6	11%
Drexel	3	0	1	0	1	1	6	13%
Van Cleve	8	1	0	1	0	2	12	22%
Patterson	9	0	0	0	2	0	11	25%
GROUP TOTAL	44	3	3	9	5	6	70	16%
ECE PROGRAM TOTAL	197	30	20	54	13	21	335	20%
Per Cent of Total Enrollment	12%	2%	1%	3%	1%	1%	20%	

How does the rate of attendance in the ECE Program compare with the kindergarten attendance rate, school by school?

A comparison of preschool and kindergarten attendance rates is given in TABLE 5, by schools or ECE centers and according to the priority groupings. Generally, as might be expected, the preschool rates are lower than the kindergarten percentage of attendance, school by school. Exceptions to this were ECE centers McGuffey, Huffman, Highview, Hawthorne, Washington, Gardendale, and Drexel. No kindergarten rate is given for children's Services (formerly Shawen Acres) as it is not a public school.

With attendance rate as the measure, again there appears to be a tendency for the benefit of the Early Childhood Education Program to be more pronounced for Priority Group III than for the other two groups, 86.5% in comparison to 78.1% and 81.5%. This might suggest that a more concentrated effort of social workers' visits is necessary for the ECE centers in the first two groups, if a higher attendance rate is desired.

What percentage of the potential number of enrollees is being served in each center?

TABLE 6 provides "service indexes" based upon comparisons of (1) the preschool average daily membership with that of the kindergarten for the same school, shown in column D; (2) the kindergarten ADM with the first grade ADM, given in column E; and (3) the preschool ADM with the first grade ADM, listed in column F and ranked in column G. ECE centers whose rank in column G is considerably lower than their positions in the priority list are noted with a (-) sign, indicating that the rank of the ratio of preschoolers to first graders in a school did not fall within, near, or above the priority group's ranks:

Priority I, ranks 1 through 6;
Priority II, ranks 7 through 16; and
Priority III, ranks 17 through 25.

TABLE 5

COMPARISON OF RATES OF ATTENDANCE IN EARLY CHILDHOOD EDUCATION CENTERS WITH ATTENDANCE RATES FOR KINDERGARTEN IN THE SAME SCHOOLS, 1970-1971

	Pre-School			Kindergarten		
ECE Center	Average Daily Member-ship (ADM)	Average Daily Attend-ance (ADA)	Per Cent of Attend-ance	Average Daily Member-ship (ADM)	Average Daily Attend-ance (ADA)	Per Cent of Attend-ance
Priority I						
Irving	63.2	48.2	76.3%	65.9	58.8	89.3%
MacFarlane	76.4	62.7	82.1%	100.5	94.4	93.9%
Emerson	62.2	42.2	74.3%	74.6	58.7	78.7%
Louise Troy	86.5	63.0	72.3%	117.6	105.7	89.9%
Edison	76.7	58.9	76.8%	57.3	50.0	87.8%
McGuffey	76.7	63.8	83.2%	99.2	80.5	81.1%
Children's Serv.	23.4	20.5	87.6%			
GROUP TOTAL	465.1	363.3	78.1%	515.1	448.1	87.0%
Priority II						
Weaver	70.5	55.6	78.9%	77.5	64.5	83.2%
Huffman	37.3	28.9	77.5%	65.5	49.8	76.2%
Whittier	38.1	31.9	83.7%	62.9	57.6	91.5%
Greene	33.6	27.2	81.0%	39.3	35.6	90.5%
Highview	37.7	33.3	88.1%	70.2	58.4	83.2%
Hawthorne	17.4	14.9	85.6%	31.2	26.5	84.8%
Jackson Primary	119.2	96.9	81.3%	131.8	117.0	88.8%
Wogaman	37.7	32.1	85.1%	91.7	80.6	87.9%
Ruskin	32.2	25.5	79.2%	72.6	64.0	88.1%
Longfellow	39.5	31.4	79.5%	80.6	73.8	81.5%
GROUP TOTAL	463.3	377.7	81.5%	723.3	627.8	86.8%
Priority III						
Jane Addams	32.2	26.6	82.6%	39.8	37.3	83.6%
McNary	34.6	30.1	87.0%	55.3	52.5	95.0%
Washington	38.8	33.5	86.3%	55.6	47.3	85.0%
Westwood	47.8	42.7	89.3%	105.2	95.0	90.3%
Franklin	32.5	27.3	84.0%	74.9	66.4	88.6%
Gardendale	42.0	36.2	86.2%	54.1	43.2	79.8%
Drexel	42.1	39.3	93.3%	70.1	57.6	82.2%
Van Cleve	36.8	30.8	83.7%	101.3	89.4	88.3%
Patterson	35.1	29.1	82.9%	48.5	44.6	92.0%
GROUP TOTAL	341.9	295.6	86.5%	604.8	533.3	88.2%
ECE PROGRAM TOTAL	1,270.3	1,036.6	81.6%	1,803.5	1,579.7	87.6%

TABLE 6

EXTENT OF SERVICE PROVIDED BY EARLY CHILDHOOD EDUCATION (A COMPARISON OF AVERAGE DAILY MEMBERSHIP OF ECE WITH ADM OF SUCCEEDING LEVELS OF EDUCATION)

ECE Center	Average Daily Membership			Service Index			Rank of F
	PreK	Kind.	1st Gr.	PreK/K	K/1st	PreK/1st	
	A	B	C	D (A ÷ B)	E (B ÷ C)	F (A ÷ C)	G
Priority I							
Irving	63.2	65.9	68.4	95.9*	96.3*	92.4*	1
MacFarlane	76.4	100.5	114.3°	76.0	87.9°	66.8°	8
Emerson	62.2	74.6	89.8	83.4	83.1	69.3	6
Louise Troy	86.5	117.6	155.8	73.6	75.5	55.5	11 -
Edison	76.7	57.3	93.1	133.9*	61.5	82.4	2
McGuffey	76.7	99.2	102.6	77.3	96.7*	74.8	5
GROUP TOTAL	441.7	515.1	624.0	85.8	82.5	70.8	
Priority II							
Weaver	70.5	77.5	110.4	91.0*	70.2	63.9	9
Huffman	37.3	65.5	120.4	56.9	54.4	31.0	24 -
Whittier	38.1	62.9	72.5	60.6	86.8	52.6	12
Green	33.6	39.3	42.8	85.5	91.8*	78.5	4
Highview	37.7	70.2	103.5	53.7	67.8	36.4	19 -
Hawthorne	17.4	31.2	48.2	55.8	64.7	36.1	20 -
Jackson Primary	119.2	131.8	147.8	90.4*	89.2	80.6	3
Wogaman	37.7	91.7	112.7	41.1	81.4	33.5	22 -
Ruskin	32.2	72.6	108.6	44.4	66.9	29.7	25 -
Longfellow	39.5	80.6	101.1	49.0	79.7	39.1	18 -
GROUP TOTAL	463.3	683.6	968.0	67.8	70.6	47.9	
Priority III							
Jane Addams	32.2	39.8	70.4	80.9	56.5	45.7	16
McNary	34.6	55.3	70.5°	62.6	78.4°	49.1°	14
Washington	38.8	55.6	82.6	69.8	67.3	47.0	15
Westwood	47.8	105.2	112.8	45.4	93.3*	42.4	17
Franklin	32.5	74.9	99.2°	43.4	75.5°	32.8°	23°
Gardendale	42.0	54.1	62.6	77.6	86.4	67.1	7
Drexel	42.1	70.1	73.5	60.1	95.4*	57.3	10
Van Cleve	36.8	101.3	107.6	36.3	94.1*	34.2	21
Patterson	35.1	48.5	70.1	72.4	69.2	50.1	13
GROUP TOTAL	341.9	604.8	749.3	56.5	80.7	45.6	
ECE PROGRAM TOTAL	1,270.3	1,803.5	2,341.3	70.4	77.0	54.3	

* High rate of service - Lacking in Priority Service °Estimate(Ungraded School)

In Priority Group I, Louise Troy's preschool average daily membership should be increased by about 30 children or more in order to attain a service index of at least 67.0, thus serving a number that would include 2 out of every 3 children who attend first grade. This would raise the PreK/K index to 89.3. Actually both Troy and Edison have low service indexes when their kindergarten ADM is compared to that of their first grade. At Edison, about 4 in 10 children do not attend in kindergarten; at Troy, about 1 in 4 apparently have not had the advantage of kindergarten when they come to first grade.

In Priority Group II, only Weaver, Whittier, Green, and Jackson Primary have an average daily membership in preschool which is more than half the number enrolled in first grade (column F, TABLE 6). The ratios run as low as 1 in 3 at Huffman, Wogaman, and Ruskin. Priority Group III has two schools with similiarly low ratios: Franklin and Van Cleve.

The service indexes of TABLE 6 could be utilized to plan for service to more adequate numbers of children in some of the centers. This table provides evidence that there is need for encouragement of kindergarten enrollment in a number of the schools. If this cannot be provided as a part of the Early Childhood Education program, the need is great enough that the school system itself should consider organizing a kindergarten enrollment program during the months preceding kindergarten. Such a program could make effective use of the social workers who work with ECE and know the families of the community.

Were any major changes made for 1970-71?

The center noted as "Children's Services" in TABLES 2 - 5 held two sessions daily instead of one, with children of ages 3 to 5 under Family Protective Service or wards of the Montgomery County Welfare Department being transported by a bus furnished by Children's Services to the center at Shawen Acres Home for Children. Kindergarten services were curtailed.

PRE-SCHOOL TEACHERS ANALYZE NEEDS OF CHILDREN

In late May of 1971, in an evaluation of the ECE Program, 35 preschool teachers in the program were invited to rank from 1 to 5 the characteristic needs of the participants of the ECE Program in their morning and afternoon groups, making a selection from 37 items offered in the Annual Title I Evaluation of the State Department of Education. Although the rankings were done independently, there was remarkable unanimity of opinion about the most significant needs, as is indicated in TABLE 7 on the next page. This is especially true of Item 1, reflecting a primary program objective.

"Improving self-image" was given a rank of 1 by 32 of the 33 teachers responding, or by 97% of the responses. The single person who did not place the self-image item first, gave first rank to "Increase ability to communicate by means of oral language", the item which placed second as the most characteristic need. This need was recognized as characteristic by 85% of the responses.

"To develop a feeling of acceptance by others" and "To develop a feeling of acceptance of others" ranked third and fourth, respectively, their inclusion among the top five approved by 67% and 51%, respectively. The social skills represented by these two items complement each other.

The item which ranked fifth was "Increased participation in purposeful activity", noted by 39% of the responses as a characteristic need of disadvantaged pre-kindergarten children.

A study of the implications of each of the top 17 of the 22 items ranked by the preschool teachers may provide a guide to administrative personnel in designing a training program for teachers and aides, one that will attempt to meet children's needs as the teachers view them. Each of the items listed in TABLE 7 was considered of top priority by at least two teachers in the ECE Program and, therefore, deserves some attention in program implementation.

TABLE 7

PRESCHOOL TEACHERS' RANKING OF CHARACTERISTIC NEEDS OF PRE-KINDERGARTEN PARTICIPANTS IN THE EARLY CHILDHOOD EDUCATION PROGRAM, May 1971

Rank	Characteristic Need	Category	Weighted Points	Placing Items In Top 5 Needs	
				Number	Per Cent
1	Improve self image	Attitudes & Values	305	32	97%
2	Increase ability to communicate by means of oral language	Learning Skills	188	28	85%
3	To develop a feeling of acceptance by others	Social Skills	107	22	67%
4	To develop a feeling of acceptance of others	Social Skills	96	17	51%
5	Increase participation in purposeful activity	Attitudes & Values	58	13	39%
6	Increased feelings of success in the school setting	Learning Skills	39	10	30%
7	Intellectual stimulation	Learning Skills	36	7	21%
8	Improve relationships with parents	Attitudes & Values	30	8	24%
9	Increase attention span	Learning Skills	30	7	21%
10	Increase ability to understand oral language	Learning Skills	28	7	21%
11	Acceptance of necessary routine	Attitudes & Values	21	5	15%
12	To develop social responsiveness	Social Skills	16	3	9%
13	Acceptance of responsibility in personal relationships	Attitudes & Values	14	3	9%
14	Increase cooperativeness	Attitudes & Values	12	2	6%
15	Improve auditory discrimination	Physical Condition	10	2	6%
16	Increase independence from family members	Social Skills	5	2	6%
17	Improve nutrition	Physical Condition	4	2	6%
18-22	Five other items listed by a single teacher each			4	

WELL-DEFINED OBJECTIVES POINT THE WAY

The Early Childhood Education Program in Dayton has a two-fold primary purpose:

1) To provide an extensive educational program for developing the potential of very young children (ages 2-3-4) who are educationally disadvantaged; and

2) To involve the parents of these children in a program which will enable them to function more effectively in the role of parent and homemaker.

To accomplish this primary purpose in both its facets, the program has identified the following specific objectives to be achieved:

To Help Children:

1) Develop an understanding of themselves and a feeling of self-worth.

2) Develop a sense of responsibility and self-confidence, and a feeling of security and acceptance.

3) Stimulate concern, understanding, and acceptance of children and adults.

4) Live freely and happily in a group.

5) Strengthen inner emotional controls and greater self-discipline.

6) Develop self-reliance — become independent.

7) Grow and develop physically, promoting his own health and physical growth.

8) Develop sensorimotor skills, motor coordination, and motor control.

9) Observe, discover, experiment, and acquire information.

10) Extend their understanding of and clarify their concepts of the world in which they live.

11) Increase their use of language and communication skills.

12) Develop self-expression through experiences in art, music, dance, and literature.

13) Experience and appreciate success and achievement in their day-to-day learning and living.

14) Develop a favorable attitude toward learning and school.

15) Develop ability to do critical thinking and problem solving.

To Help Parents:

1) Exhibit wholesome feelings toward themselves and others.
2) Develop skills in helping children achieve a feeling of dignity and worth.
3) Understand the specific role they can play in the physical, mental, social, and emotional growth of their children.
4) Improve the quality of parent-child interaction.
5) Increase their interest in their children's school and experiences more conducive to positive development of the potential of the entire family.

Specific Behavior Characteristics

Through the years of its operation, the Dayton ECE Program leaders and teachers have identified certain specific behavior characteristics that are indicative of a child's possession of understandings, skills, and the abilities essential to their realization. For convenience of reference, these behaviors are listed according to curriculum emphasis, although, in reality, they may occur throughout the child's day.

I. Language Arts: Specific Behavior Characteristics

Through Dramatic Play, the child is able to--

Identify himself with persons or things, either from first hand contact, or about which he has learned vicariously.

Speak and use conversation while "trying on life."
Speak for a puppet.
Use an increased vocabulary in speaking, as time progresses.

Through Role Playing, the child is able to--

Play a role or act out a situation as he chooses.

Through Conversation, the child is able to--

Listen.
Take turns in speaking and listening.
Understand and follow simple directions.

Look carefully at pictures, recognizing objects by pointing or naming, and noting details of the pictures.

Ask questions himself and answer others' questions.
Speak in simple sentences.
Share a new object by telling about it to a small group.
Tell an incident in sequence to a small group.

Through Poetry, the child is able to—

Listen attentively to a poem.
Evoke some personal response after hearing a poem.
Say fingerplays, nursery rhymes or poems, individually or with a group.
Participate in choral speaking.
Make up rhyming lines or jingles.
Choose words that rhyme.

Through experiences with the Peabody Language Development Kit, the child is able to—

Identify a circle, a square, and a triangle.
Recognize and identify foods by visual and tactile contact.
Differentiate and identify the eight colors presented in the kit.
Recognize and identify with human and animal families.

Tell the pitch of different musical tones by listening and looking at the xylophone.

Identify the basic parts of the body.
Rote count to 5 and recognize up to five objects.
Listen to a story or a poem, and to recall events in a story.
Dress himself and the mannequin in sequence, and identify the clothing.
Speak for puppets, as well as pantomime and imitate actions.
Recognize various vehicles.
Recognize community helpers and know their jobs.
Identify various toys.
Identify household items.

Through Vocabulary Development, the child is able to—

Participate in environmental experiences.
Accompany the group on planned field trips.
Meet and recognize community helpers.

Through Attentive Listening, the child is able to—

Follow directions.
Orally identify sounds.
Orally discriminate likenesses and differences in sounds.
Follow a story to the end.

Through Appreciative Listening, the child is able to—

Listen for enjoyment.

Through Analytical Listening, the child is able to—

Note details.
Recall sequences.
Make judgments.
Draw conclusions.
Follow directions.

Through Marginal Listening, the child is able to—

Listen while he is involved in more than one activity.

II. Art: Specific Behavior Characteristics

Through Scribbling, the child is able to—

Make an indefinite scribbling pattern (schema).
Strive for a relationship with reality in his drawings (pre-symbolic).
Make a picture recognizable to others (symbolic).

Through Modeling clay, dough, wheat paste, or soap, the child is able to—

Beat and pound material, followed by breaking and rolling.
Name his product.
Pull out and/or add on details such as ears, nose, arms, legs.
Produce a form that has meaning to an adult.

Through Fingerpainting, the child is able to—

Feel and experiment with paint.
Use fingers, hands, and arms in painting.
Overlay-smear paint over entire area.
Experiment with and produce patterns and designs.

Through Pasting, the child is able to—

Feel, manipulate, and explore the materials.
Use the material in a controlled area.
Use the paste in controlled quantity.
Use paste with other materials.

Through Cutting and Tearing, the child is able to—

Cut and tear aimlessly.
Control tearing.
Control scissors and direction of cutting.
Name his forms.
Produce forms that have meaning for adults.

Through Woodworking, the child is able to—

Hammer a nail into an object.
Saw a piece of wood.
Make and name a form.

III. Music: Specific Behavior Characteristics

Through Listening to Music, the child is able to—

Listen as he plays.
Listen as he sits alone.
Listen in a small group of children and/or with an adult.
Listen in a larger group of children.
Discriminate and analyze what he hears:
    Fast-slow   High-low   Loud-soft   Happy-sad
    Vocal-instrumental   Individual or group singing
Distinguish familiar instruments.

Through Rhythmic Experiences, the child is able to—

Make random movements using large muscles.
Move rhythmically for a short period of time.
Respond when the teacher emphasizes rhythmical movements with accompaniment and alters it.
Adjust bodily movements to accompaniment of a regular beat-keeping time.
Adjust bodily movements to an accompaniment which involves contrast.

Through Playing Instruments, the child is able to—

Manipulate and experiment individually with different rhythm instruments.
Distinguish the difference in sound in relation to the ways in which the instruments are played, beginning to recognize the sounds of the instruments.

Use the instruments as accompaniment to his movements, but not necessarily in time with his movements.

Identify the instruments that make the appropriate sound.
Respond with accuracy to the tempo of a recording or other instruments.
Play an instrument with a small group of children.

Demonstrate curiosity and interest in instruments that adults play.
Learn names and identify the sounds of the better-known instruments.

Through Creating Music, the child is able to—

Experiment with sounds and rhythm instruments.
Initiate a new word or phrase in a song or chant.
Add short verses to a song or chant.
Choose an instrument corresponding to a song or recording.
Express mood and feeling through spontaneous bodily movement.
Identify bodily movements with specific animals, people, or things.
Act out or dramatize a song or chant.
Make up a song or chant by himself or with the help of others, along with a tune.

Through Singing, the child is able to—

Listen to a song sung by another.
Sing spontaneously as he plays alone.
Respond with actions to a song sung by another.
Join in with an occasional word or phrase as another sings.
Sing with an adult or group, not always correctly.
Sing along with an adult or group, being able to match tones.
Sing alone.
Select and request favorite songs.
Recognize songs sung or played by others.

IV. Social Studies: Specific Behavior Characteristics

Through Citizenship Education, the child is able to—

Feel good about himself.
Respond to his name when it is spoken.
Identify self by name and sex.
Have pride in his given name.
Call each child in the class by name.

Through Civics, the child is able to—

Respect limits or rules which have been made for the good of the group.

Through Conservation, the child is able to—

Care for his own possessions.
Care for school materials.
Use materials freely, but without waste.
Care for pets and flowers in the classroom.
Respect property, rights, and feelings of others.

Through Sociology, the child is able to—

Identify the members of his family and their relationship to him.
Dramatize the role of the different family members.
Have pride in his family, no matter who constitutes a family.

Through Economics, the child is able to—

Identify the type of home in which he lives.
Dramatize and discuss the function of different rooms in one's home.
Identify the type of work people do.

Through an Awareness of American Heritage, the child is able to—

Identify himself with his ethnic group.
Identify himself with the positiveness of blackness.
Identify himself with a black model or models of other ethnic groups.
Contribute during a discussion of important events in the lives of great black or white leaders.
Become aware of his uniqueness as a person being black or white.
Grow in confidence that any goal is within his reach.
Discuss important events in his or her life or the lives of other children.
Talk about changes in the neighborhood.

Through Geography, the child is able to—

Locate centers of interest and materials in the classroom.
Go on short errands in the building successfully.
Recognize the area surrounding his school and his home.
Talk about the different people and the various means of travel.

V. Mathematics: Specific Behavior Characteristics

Through Matching, the child is able to—

Say and demonstrate the following words: Pair Several Few More
Many Set Group Bunch Some None All

Match concrete objects from 0 through 5, using one-to-one correspondence.

Match concrete objects from 0 through 5, using many-to-one process.

Match pictures of like objects of the same quantity arranged in the same order from 0 to 5.

Match pictures of unlike objects of the same quantity, arranging them in the same order from 0 to 5.

Match like symbols of the same quantity arranged in the same order from 0 to 5.

Match a group of like symbols to a group of unlike symbols of the same quantity from 0 to 5.

Through Sets, the child is able to—

Say and demonstrate the following words: Set Group Bunch
More than Less than

Make sets from 0 through 5, using objects that are concrete.

Make sets from 0 through 5, using visual aids.

Make sets from 0 through 5, using abstract materials.

Through Counting, the child is able to—

Say and use number words, 1 to 5, in songs, chants, poems or finger plays.
Count by rote from 1 to 5.
Count from 1 to 5, establishing one-to-one correspondence.
Say how many are in a group of concrete objects after counting, 1-5.
Tell, after counting, 1 through 5, how many objects are in a picture.
Count by rote from 1 through 10.
Establish one-to-one correspondence from 1 through 10.
Tell, after counting, how many are in a group of concrete objects, 1-10.

Through Comparison, the child is able to—

Say and demonstrate the following words: Fast-slow Full-empty Heavy-light Short-tall First-last In-out Hugh-tiny Fat-thin High-low Top-bottom Up-down More-less Big-little Large-small In front of Behind Beside

Discuss, using the proper vocabulary, the difference between certain concrete objects.

Discuss, using the proper vocabulary, the difference between certain pictures of objects, animals, and people.

Through Shapes, the child is able to—

Say and demonstrate the following words: Circle Triangle Square Retangle Hexagon Oval
Place in proper categories, or sort the following shapes: Circles Squares Triangles Rectangles Hexagons Ovals
Locate objects with a definite shape, either in the classroom, at home, or any place in his world.
Reproduce a circle.
Demonstrate symmetry by cutting in two, the different shapes.

Through Numeration, the child is able to—

Recognize and show numeral groupings.

Through Order, the child is able to—

Say and demonstrate the following words: First Last Second Third Fourth Fifth

Through Measuring, the child is able to—

Say and demonstrate the following words: Full-empty More-less Longer-shorter Half Taller-shorter Heavy-light

Through Time, the child is able to—

Say and use the following vocabulary: Now Days of the week Soon Sometimes Today Tomorrow Yesterday Playtime Rest time Snack time Fall Winter Spring Summer Months of year

Through Reasoning, the child is able to—

Solve simple problems relating to himself.

Through Logic, the child is able to—

Reproduce visual patterns.
Reproduce simple, auditory rhythm patterns.

Through Money and Money Values, the child is able to—

Name coins: Penny Nickel Dime Quarter
Tell that paper money has value.

VI. Science: Specific Behavior Characteristics

Through Five Senses, the child is able to—

- Recognize that he has 5 senses: touch taste smell hearing sight.
- Use his five senses to gain information.

Through a study of Plants, the child is able to—

- Observe that some plants will grow from seeds.
- Observe that some plants will grow from bulbs.
- Observe that some plants will grow from roots.
- Observe that some plants need soil for food.
- Observe that most plants need water to grow.
- Observe that most plants need light to grow.
- Observe that most plants need air to grow.
- Observe that roots of plants grow down, vines or stems grow up.
- Classify food from plants.
- Observe that some seeds are edible.
- Observe that some seeds travel in different ways.

Through a study of Animals, the child is able to—

- Classify the many different kinds of animals.
- Classify animals that move in different ways.
- Classify animals that live in water.
- Classify animals that live in the ground.
- Classify animals that live on land.
- Classify animals that make good pets.
- Classify animals that are useful to man.
- Observe that animals eat many kinds of food.

Through a study of Earth and Universe, the child is able to—

- Observe that we live on the earth.
- Observe that the earth is large and shaped like a ball.
- Observe that the earth is made of land, air, and water.
- Observe that the moon, sun, and other stars are in the sky.
- Observe that stars move in the sky.
- Observe that the sun gives off light and heat.

Through a study of Wind and Weather, the child is able to—

- Feel air around him.
- Observe that space is an area that is not occupied.
- Observe and feel the process of breathing air.
- Identify wind as moving air.
- Observe wind moving things.
- Hear the sounds objects make when the wind moves them.
- Observe that water disappears into air.
- Investigate and observe that heat makes water disappear.
- Observe that clouds are made up of many floating drops of water.
- Observe that rain falls from clouds.
- Observe that snow is water vapor frozen into crystals.
- Observe that snow will fall instead of rain if it is below freezing outside.

Through a study of Magnets, the child is able to—

- Observe that magnets attract some metal objects.
- Observe that some magnets are stronger than others.
- Observe that magnets help to make our work easier and faster.
- Observe that we can make our own magnet.
- Observe that magnets will attract through other objects.

Through a study of Wheels, the child is able to—

Observe that wheels make it easy to pull or push a load.
Observe that wheels move slowly or quickly.
Report that wheels aid us in traveling faster.
Observe that wheels are different sizes.
Observe that many things move on wheels.
Observe that wheels turn around.
Report that wheels aid us in working.

VII. Health and Safety: Specific Behavior Characteristics

Through Body Structure and Functions, the child is able to—

Understand that we develop skills at different ages.
Name and tell functions of the body parts.
Discuss the differences in growth rates in children, plants, and animals, and accept the differences as normal.
Discuss the five senses and how we use them.

Through Body Care and Grooming, the child is able to—

Wash and dry his hands when it is necessary.
Tell why we keep things out of our eyes, ears, nose, and mouth.
Use the toilet facilities independently and properly.
Use a tissue properly.
Tell you about his or her teeth.
Brush teeth in the proper way.
Tell why we must bathe daily.
Discuss why he should keep his hair clean and tidy.
Discuss the proper care of clothing.
Tell why we wear clothing that is suitable to the environment or to an activity.

Through Community Health, the child is able to—

Share in cleaning and tidying up the classroom.
Have a positive attitude toward keeping his surroundings clean and neat, while still being able to use them to their capacity.
Accept the different health services: Immunizations, medical and dental examinations, and first aid.

Through Food and Eating Practices, the child is able to—

Taste new foods as well as familiar foods.
Recognize common foods.
Set the table properly.
Use proper table manners.
Tell why we clean fresh fruit and vegetables before eating them.
Distinguish between edible and non-edible parts of foods.
Participate in informal conversation at snack time, using soft voices.
Relate reasons for washing before eating.
Follow a routine for disposing of snack materials.

VIII. Rest and Snack Time: Specific Behavior Characteristics

Through Rest Time, the child is able to—

Pick up his own mat and paper quietly, select his resting space, and return mat folded correctly to proper storage.
Lie quietly on mat in a semi-darkened room.
Relax during rest period.
Rest without bothering neighbors.

Through Rest Time, the child is also able to—

Rest following an active, or stimulating, experience.
Repose, think, and daydream.
Accept rest period if it is not too long.

Through Snack Time, the child is able to—

Properly wash hands before assisting and/or eating.
Assist in the preparation of snack.
Assist in setting the table.
Assist in serving the snack.
Name foods; give size, shape or color of foods; and discuss how foods grow.
Be confronted with both familiar and unfamiliar foods.
Ask for what he wants.
Relax, converse, and socialize during snack time.
Practice good social behavior during snack time.
Develop good manners and a desirable attitude.

IX. Physical Education: Specific Behavior Characteristics

Through General Playground Behavior, the child is able to—

Follow the teacher's directions concerning safety.
Play with others on the playground and share the equipment.

Through Jungle Gym, the child is able to—

Discuss and use the rules for the jungle gym.
Coordinate the whole body on the climber.
Play cooperatively.

Through Swings, the child is able to—

Discuss and follow the safety rules for using swings.
Sit in the swing and be pushed by an adult.
Take turns.

Through Slide, the child is able to—

Discuss and use the safety rules for the slide.
Take turns with his peers during slide play.

Through Wheel Toys, the child is able to—

Discuss and follow the safety rules for operation of wheel toys.
Manipulate wheel toys.
Share wheel toys.

Through Sandbox, the child is able to—

Discuss and use the safety rules of playing in the sandbox.
Share the sand toys.

Through Balls, the child is able to—

Discuss and use the safety rules of ball play.
Roll the ball.
Bounce and catch the ball.
Throw the ball.
Kick the ball with one foot.
Play cooperatively.

Through Bean Bags, the child is able to—

Discuss and use the safety rules of playing with bean bag.
Throw a bean bag at a target, not more than 5 feet away.
Take turns.

Through Jump Rope, the child is able to—

Discuss and use the safety rules of jumping rope.
Jump over rope, alternating sides and heights of rope.
Turn rope with adult and later by himself.
Jump rope when turned by one adult and one child.
Jump rope by himself.
Jump over the whiffle ball on the end of the rope.

Through Imitative Activities, the child is able to—

Imitate actions or movements of another child, animal, or machine.
Use a series of bodily movements based on a story.

Through Outside Games, the child is able to—

Discuss and follow the rules of the game.
Play cooperatively.

Through Body Image, the child is able to—

Identify parts of his body.
Move specified parts of his body.
Begin to distinguish between right and left.

Through Space and Direction Awareness, the child is able to—

Identify body position in relation to surroundings.
Realize the course of movement he must follow in order to change from his present position to his destination.

Through Balance, the child is able to—

Sustain control of his body when using both sides--simultaneously, individually, or alternately.

Through Basic Body Movement, the child is able to—

Move his body through all developmental stages.

Through Symmetrical Activities, the child is able to—

Use both sides of the body, with freedom and coordination.

Through Eye-Hand Coordination, the child is able to—

Coordinate the combination of eyes and hands working together.
Steer his hands through space to accomplish an appointed task.

To promote all of these specific behavior characteristics, daily and weekly class programs are balanced for their development. Criterion testing of these specifics is accomplished informally during the year.

The above 10-page report of specific behavior characteristics is an adaptation of the curriculum guide developed by the Dayton ECE staff during the past year. The guide is under constant experimentation and scrutiny for improvement.

STAFF MEMBERS, TRAINING, AND RESPONSIBILITIES

On the two following pages is a listing of the different categories of staff members in the Early Childhood Education Program and the particular responsibilities for each role. All staff members worked together to achieve the objectives of the program as stated in the foregoing pages. The number employed in each position is listed, a total of 135 persons.

For the 1971 summer phase of the pre-school program, members of the staff who were needed continued in employment from the school year program.

Training activities for the staff were carried on throughout the year, an accumulation of approximately 11,000 hours of training for all the professional staff members, the time divided as follows:

Programs arranged by local ECE administration	84%
Coordinated teacher-teacher aide programs	11%
Conferences, workshops	3%
Visitations and other activities	2%

For the non-professional staff, a group composed chiefly of aides, a total of approximately 4600 hours of training was carried out, with the following kinds of training provided:

Programs arranged by local ECE administration	81%
Coordinated teacher-teacher aide programs	13%
Other training activities	6%

The teaching staff, composed of teachers and assistant teachers, plus traveling resource teachers, had had the following professional training:

Master's degree	4%
Bachelor's degree	44%
Less than Bachelor's degree	52%

Of the degree teachers, 58% had 7 or more years of overall teaching experience, 33% had 3 to 6 years, and 9% had 1 or 2 years. Of the pre-school teachers without a degree, 59% had 3 to 6 years of overall teaching experience, and 41% had 1 or 2 years of teaching experience. The level of professional training combined with teaching experience and the specific in-service training provided by the program insured a high level of competence in staff performance.

TABLE 8

CHIEF DUTIES OF PROGRAM STAFF FOR EARLY CHILDHOOD EDUCATION

Position	Major Responsibilities
Project Coordinator (1)	Leadership of the Project. Coordination and supervision of all staff members and pre-kindergarten classes. Staff training. Parent education and involvement. Selection of materials and equipment. Financial responsibility. Collection of data and instrumentation. Research. Follow-up.
Administrative Aide (2)	1) Bookkeeping, accounting, purchasing, ordering. 2) Payroll, enrollment records, attendance records of children and staff. General clerical and secretarial duties.
Parent Consultant (1)	Development and direction of Parent Education and Involvement. Guides teachers in organizing parent meetings. Attends parent meetings. Arranges for parent field trips and excursions. Provides instruction to parents
Parent Program Assistant (8)	Assists Parent Consultant, teachers, and parents in organization, development, and programming of a center's Parent Education Program. Schedules meetings for schools assigned. Handles parent communication.
Parent Program Resource Aide (8)	Responsible to Parent Program Assistant in planning care of children brought by parents when attending parent meetings. Assists in classroom during a teacher's absence in meeting with parents.
Toddler Aide (8)	Provides supervision of toddlers who are brought to the ECE center while parents engage in Parent Education activities or are involved in the classroom. Works with and is responsible to Parent Program Aide.
Social Service Consultant (1)	Directs the activities of Social Case Workers.
Social Service Caseworker (11)	Interviews parents in registration of children in ECE. Works with parents. Observes children in classroom. Counsels parents on individual basis regarding child's problems. Assists in family problems. Arranges for health screenings and follow-up with parents. Assists with Parent Education.
Outreach Teacher and Aide (2)	Encourages parents and children to enroll in the Project. Attempts to teach parent and child in the home, with possible subsequent enrollment.
Nutrition Consultant (1)	Works with Parent Consultant in nutritional aspects of Parent Education. Plans acquisition of food and food services for the Project. Guides classroom teaching personnel in child nutrition.
Nurse (1)	Arranges for health screening of classes at Children's Medical Center. Pre-plans health screening experience with children in classroom. Arranges follow-up. Health problems.

TABLE 8 (continued)

Position	Major Responsibilities
Curriculum Consultant (2)	Responsible that classroom instruction and activities lead to attainment of Project objectives. Visits ECE classroom, confers with classroom personnel. Provides guidance and assistance where needed. Helps to secure supplies and equipment. Aids at weekly in-service.
Natural Science Specialist (1)	Works with teachers in classrooms, bringing necessary exhibits and materials. Assists with pre- and in-service education.
Sensorimotor Teacher and Assistant (3)	Sensorimotor Teacher assists classroom teachers in Group I, assistants work in Groups II and III, serving as resource and guide in planning and organizing sensorimotor activities with children, on scheduled visits.
Resource Teacher (3): Art and Woodworking Music Language Arts	Serves as demonstration teachers in the classroom. Assists the teacher in formulating plans and techniques for continuation of learning activities in daily curriculum schedule. Aids in pre- and in-service education of teachers. Occasionally serves as substitute teacher.
Traveling Resource Aide (2)	Works as non-certified assistant of the Resource Teacher in art and woodworking, music, and language arts. Assists teachers on a rotating schedule.
Art Docent (2)	Schedules visits of classes to New Visions Museum for children. Involves children in art activities at museum.
Special Service Consultant (1)	Oversees all special services provided by special or resource teachers to children and to staff personnel. Organizes the master schedule for services. Responsible for all rental facilities, contracts, and supervision of part-time custodians in these facilities. Arranges film service for classrooms.
Teacher (34)	Works with children in the ECE classroom. Plans and supervises daily learning activities. Works with Assistant Teacher in cooperative approach to solving problems. Holds parent conferences; interviews and screens eligible parents and participants. Visits homes. Arranges one parent meeting a month. Schedules center's staff meetings.
Assistant Teacher (27)	Works with children in cooperation with the Project Teacher.
Teacher Aide (13)	Follows a traveling schedule to assist teachers and assistant teachers.
Substitute Teacher (2)	Acts full-time substitute. When not needed as substitute teacher, acts as guide or "big sister" to new personnel.
Psychologist (1/2)	Interviews and tests extreme and problem children in the Project. Participates in pre- and posttest evaluation.

CURRICULUM CONSULTANTS GUIDE TEACHERS

Over the six years of the existence of the Dayton pre-school program, the teachers themselves have helped to identify needs of the three- and four-year olds served by the program and to develop the extensive list of performance objectives and specific behavior characteristics to be worked on in the Early Childhood Education Program. In the effort to attain the project objectives during 1970-71, three ECE curriculum consultants guided the teachers in planning both scheduled activities for groups of children and a selection of self-chosen activities adapted to individual interests of the children.

In addition, the curriculum consultants helped the teachers to carry on special instruction individually or in small groups, particularly in the use of the Peabody Language Development Kit and of the Early Childhood Discovery Materials for Language Development researched by Bank Street College.

The Pre-Kindergarten Guide, which had been outlined and produced by the ECE staff cooperatively in 1969, became a working tool for the teachers in the 1970-71 school year, with the continued advice of the curriculum consultants as to the most effective and appropriate ways of utilizing its content.

Excursions and field trips were pre-planned and scheduled by the teacher in order to broaden the child's experience, using neighborhood walks, trips to farms and the airport, bus rides to see Christmas displays and Rike's Puppet shows, and excursions to children's parks--each happening allowing the child to enlarge and explore his world.

In-service education for teachers, assistant teachers, and aides continued on a weekly basis. Cluster meetings and small group meetings, directed by the consultants, proved to be valuable in helping with team communication. For total staff in-service, special speakers were invited to help bring about a better understanding in the area of human relations, music, creative movement, food, and health.

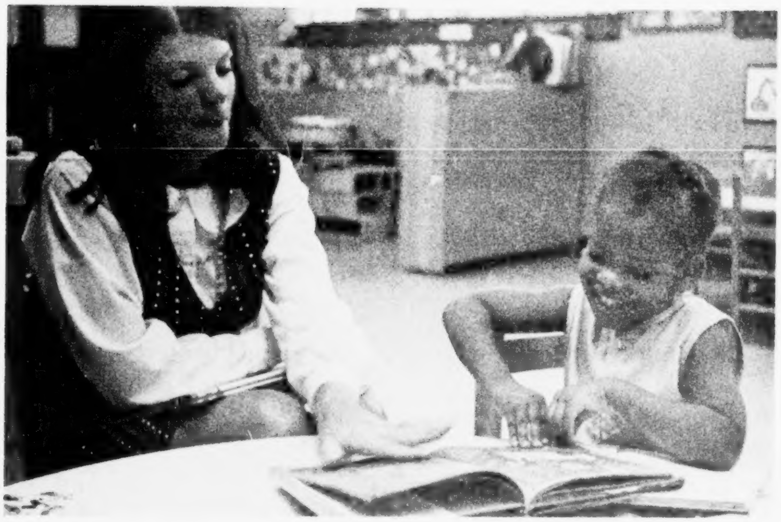
During the assessment of kindergarten children, the longitudinal study to evaluate the impact of the Early Childhood Education program on cognitive development, the curriculum consultants aided in administering the pre- and post-tests to the children.

A semi-annual cooperative assessment of teaching performance was initiated. The teacher and consultant each completed the evaluation form for the teacher, followed by a conference regarding his or her strengths and weaknesses.

During the six-week summer program, the curriculum consultants guided the teachers in their planning for new experiences with children. Extended outdoor activities included art and water play, field trips to pick fruits and vegetables, visits to parks, and picnics with parents. All of these happenings stimulated children's language development as they talked about what they had seen and done, and, consequently, helped to build a worthy self-concept.

During the summer, the teaching teams at each center received additional personnel, some part-time, some older citizens, and some younger people. For the center to benefit from these extra human resources, the consultants assisted the teacher in planning for each staff member's responsibility.

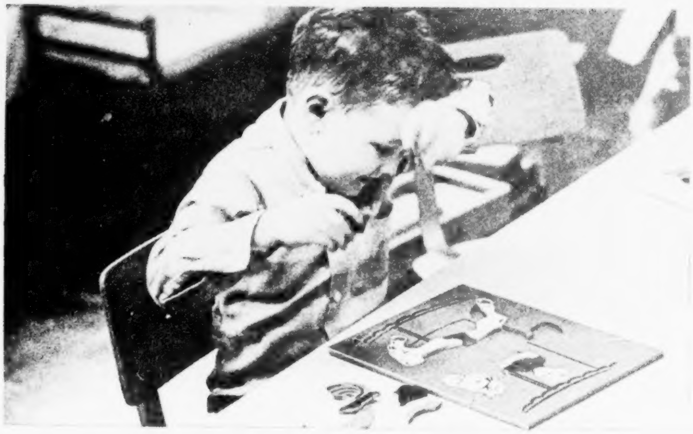
Pictures on the following pages indicate something of the wide range of the Dayton pre-school curriculum and its flexibility in meeting children's needs.



Happiness is
"reading" a book!

"How much does it cost?"

"I Can Do It!"



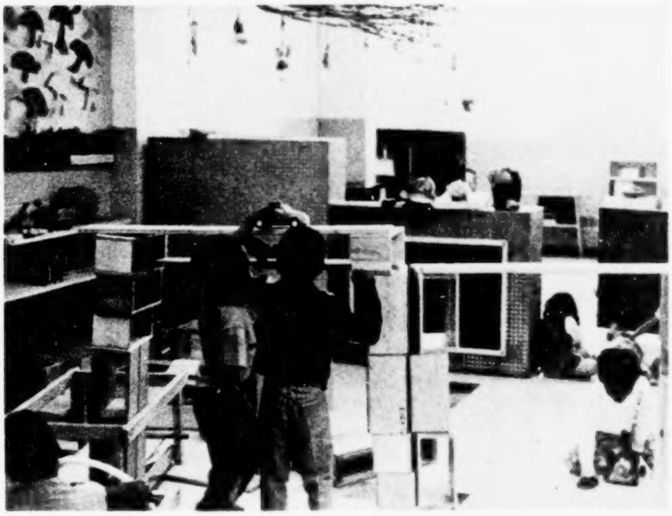
LANGUAGE DEVELOPMENT . . .

NUMBER CONCEPTS . . .

PERCEPTUAL MOTOR . . .

FORM PERCEPTION . . .
FREELY CHOSEN ACTIVITIES . . .
SCIENCE THROUGH OBSERVATION . . .

"A circle is round."



"Here it goes on the highway."

"Can you swim, too?"

SPECIAL SERVICES STAFF WORK WITH CHILDREN AND TEACHERS

A Visit From Mother Goose

The Language Arts Specialist

1) worked closely with classroom teachers in planning development of language arts skills in conjunction with classroom activities;
2) sometimes wore a costume, in the role of "Mother Goose", a fantasy that helped to enhance storytelling, poetry, and music or rhythms;
3) provided resource materials for teacher use; and
4) planned cultural experiences and enrichment for children.

The Art and Woodworking Resource Teacher

1) helped classroom teachers plan art activities for the children;
2) decorated classroom with seasonal decorations;
3) provided children with many experiences, using different kinds of tactile media and materials; and

The Music Specialist, added to the ECE project for the summer,

1) suggested music and rhythm activities for the classroom teachers;
2) gave the children experiences in singing and rhythm, and
3) introduced the children to different musical instruments and how they sound.

Sensorimotor Skills Specialists' work is described in the next part of this report.

ECE NURSE CONDUCTS HEALTH PROGRAM OF PREVENTION AND REMEDIATION

During visits to the ECE centers, the ECE nurse did visual and audio testing as necessary, as well as urinalysis testing. Growth measurements were taken at intervals.

Immediately prior to a center's designated screening day at Children's Medical Center, she visited each classroom at the center to give the children an explanation of the complete health screening process. To alleviate their apprehension, she told a story, showed pictures, and let the children handle medical equipment, dramatizing the actual sequence of the various procedures. This play-acting of the events that will happen at the Children's Medical Center, brings the children to the center more matter-of-factly, with less apprehension, and even with some appreciation.

Usually, on the day before the screening, the nurse examined each child's health record to make a determination of immunization needs. At this time, all needed immunizations were listed in a letter to be distributed to the parent after the screening. Allergies were noted and any other pertinent medical information. Any deletions of any part of the assessment were also noted at this time.

On the day of the screening at Children's Medical Center, the ECE nurse administered either rubella or rubeola as necessary; the next day she participated in the follow-up. Finding their own nurse on the medical team was reassuring to the children. A complete measles prevention listing was sent to the city Public Health Department. As shown in TABLE 9 the health assessment chart, approximately 51% of the children served in the health screening process were given the rubella vaccine, while 4% received rubeola. Most of the other children had been treated previously.

TABLE 9
HEALTH ASSESSMENT OF ECE PRE-SCHOOLERS AT CHILDREN'S MEDICAL CENTER, 1970-71 SCHOOL YEAR

School	Number Served	Well Children	Rubella Vaccine	Rubeola Vaccine	Physical Defects Discovered No.		Hearing Defects No.	
JANE ADDAMS	32	4 13%	21 66%	0	3 9%	Inguinal & umbilical hernias no treatment advised. Otitis media treated. Battered child-removed from home.	9 28%	7 normal 2 losses
CHILDREN SERVICES	16	2 13%	13 81%	0	2 13%	Bilat.inguinal hernia-surgery not recommended by Dr. Otitis media - T&A myringotomy completed	6 38%	4 normal 1 loss 1 incompl.
DREXEL	36	5 14%	16 44%	1 3%	6 17%	Otitis media hydrocele, asthma, cardiac defect-all evaluated by physicians and treated. Orthopedic shoes prescribed.	8 22%	7 normal 1 loss
EDISON	44	9 20%	24 55%	4 9%	5 11%	2 circumcisions, surgeries scheduled for 2 other children, all in process.	10 23%	10 normal
EMERSON	50	8 16%	24 48%	1 2%	11 22%	2 cardiacs-physician evaluated 2 completed surgeries. All physical problems were examined by physician.	8 16%	6 normal 2 loss
FRANKLIN	35	4 11%	15 43%	1 3%	4 11%	All referred to physician and treated.	4 11%	3 normal 1 loss
GARDENDALE	32	4 13%	19 59%	2 6%	5 16%	3 tonsillitis-treated, no surgery advised 1 surgery 1 hyperkinetic-medication	7 22%	7 normal
GREENE	28	3 11%	20 71%	2 7%	4 14%	Orthopedic, tonsillitis-no surgery advised. Eczema-treated. Herniorrhaphy this summer.	4 14%	4 normal
HAWTHORNE	23	2 9%	12 52%	0	4 17%	2 T&A this summer, otitis media-treated. Other minor problems cared for.	9 39%	7 normal 2 loss

No.	Vision Defects	No.	Abnormal Hematocrits	No.	Speech Evaluation	No.	Dental Caries (#1-most urgent #2-less urgent)
2 6%	1 Glasses presc. 1 Incomplete	2 6%	1 CBC abn.-treatment 1 Incompl.-moved	3 9%	1 Lang. cl. 2 Incomplete	21 66%	3-#1 recommendations (2 ECE (fund (1 ADC 18-#2 recommendations essentially incomplete
1 6%	1 Glasses prescribed	0		2 13%	1 Lang. cl. 1 Incomplete	9 56%	3-#1 recommendations (2 ECE (fund (1 ADC 6 #2 recommendations essentially incomplete
2 6%	2 Referred 1 Glasses prescribed	0		4 11%	2 Lang. cl. 1 Incomplete 1 Year's evaluation	28 8%	9-#1 recommendations- 5 ECE funded & 4 ADC incomplete 19-#2 recommendations essentially incomplete
1 2%	Glasses prescribed	0		2 5%	To be re-evaluated in one year	25 57%	1-#1 recommendation (ADC) incomplete 24-#2 recommendation (2 ECE funded- rest incomplete)
3 6%	2 Glasses prescribed 1 Possible surgery in summer	1 2%	Incompleted-moved	2 4%	1 Incomplete 1 Lang. Class	38 76%	11-#1 recommendation (9 ECE funded 1 ADC completed 1 ADC incomplete) 27-#2 recommendations (6 ECE funded) 21 essentially incomplete
4 11%	3 Glasses prescribed 1 Glasses unnecessary	1 3%	CBC normal	1 3%	Incomplete	25 71%	10-#1 recommendations (8 ECE funded) 2 private, incompl. 15-#2 recommendations 1 completed, 14 incompl.
0		0		1 3%	Incomplete	27 84%	5-#1 recommendations (2 ECE funded) 3 private and incomplete 22-#2 recommendations essentially incomplete
3 11%	2 Glasses prescribed 1 In process (Appt. 7/27)	0		0		18 64%	2-#1 recommendations (1 ECE funded, 1 ADC incompl.) 16-#2 recommendations-essentially incomplete
1 4%	1 Glasses prescribed	3 13%	3 CBC normal	2 9%	Both in language class	19 33%	8-#1 recommendations (5 ECE funded, 3 ADC incomplete) 11-#2 recommendations essentially incomplete

TABLE 9 (continued)
HEALTH ASSESSMENT OF ECE PRE-SCHOOLERS AT CHILDREN'S MEDICAL CENTER, 1970-71 SCHOOL YEAR

School	Number Served	Well Children	Rubella Vaccine	Rubeola Vaccine	Physical Defects Discovered No.	Physical Defects Discovered	Hearing Defects No.	Hearing Defects
HIGHVIEW	37	5 14%	13 35%	5 14%	14 38%	5 tonsillitis-2 surgeries advised for Sept., 1 herniorrhaphy & 1 deferred. 1 surgery scheduled-summer. 2 incomplete-all others minor and resolved.	8 22%	8 normal
IRVING	60	6 10%	46 77%	0	13 22%	2 cardiacs-under cardiologist's care, 2 functional murmurs evaluated. Nasal obstruction FB removal, Myringotomy & other minor difficulties-treated.	14 23%	13 normal 1 surgery
JACKSON	125	17 14%	56 45%	2 1%	19 15%	1 cardiac to be re-evaluated in 2 yrs, 2 surgeries compl. 2 orthopedies, 3 tonsillitis no surgery advised, 1 malnutrition, 1 referred to birth defects clinic.	18 14%	17 normal 1 loss-wearing aid
LONG-FELLOW	43	5 12%	16 37%	2 5%	8 19%	1 surgery completed, sickle cell anemia disease, 1 ortho-otitis media.	7 16%	7 normal
MACFARLANE	61	9 15%	43 70%	2 3%	8 13%	4 hernias-surgery not recommended, 1 orthopedic, 1 "possible" hepatitis-neg.	10 16%	10 normal
MCGUFFEY	66	9 14%	32 48%	1 2%	14 21%	2 cardiacs evaluated, 1 orthopedic evaluated, 4 hypertraphia, T&A-1 surgery scheduled summer. 1 otitis media, 1 T&A myringatomy compl., 1 anemia-iron pres.	23 35%	18 normal 2 losses 3 moved
HUFFMAN	44	8 16%	25 57%	0	6 14%	1 tonsillitis, 1 otitis media, 1 malnutrition-complete evaluation this summer, 3 hematuria-2 normal, 1 surgery	1 2%	1 normal
MCNARY	35	7 20%	14 40%	1 3%	2 6%	Eczema, umbilical hernia-referred.	6 17%	4 normal 1 treated satisfactory recheck 1 incompl.

Vision Defects		Abnormal Hematocrits		Speech Evaluation		Dental Caries (#1-most urgent #2-less urgent)	
No.		No.		No.		No.	
2 5%	1 Glasses prescribed 1 Unnecessary	1 3%	1 CBC abnormal treated	1 3%	Incomplete	27 73%	5 #1 recommendations (4 ECE funded 1 private-complete) 22 #2 recommendations-essentially incomplete
1 2%	Glasses prescribed	1 2%	CBC normal	1 2%	Re-evaluate in summer	36 60%	12 #1-recommendations (7 ECE funded, 5 ADC incomplete) 24 #2-recommendations essentially incomplete
11 9%	7 Glasses prescribed 2 unnecessary 2 transferred & incompl	2 1%	CBC normal	0		80 64%	16 #1-recommendations (7 ECE funded, 7 ADC incomplete, 2 ADC complete) 64 #2-recommendations essentially incomplete
2 5%	2 Glasses prescribed	0		1 2%	Incomplete	29 67%	2 #1-recommendations (1 ECE funded, 1 ADC incomplete) 27 #2-recommendations essentially incomplete
2 3%	Glasses prescribed	0		1 2%	Language class	42 69%	13 #1-recommendations (ECE funded, 5 ADC incompl.) 29 #2-recommendations (5 ECE funded; remainder incomplete
2 3%	Incomplete moved	3 5%	1 CBC normal 1 CBC abnorm. 1 incomplete	1 2%	Incomplete	41 62%	13 #1-recommendations (6 ECE funded; 7 ADC, completed) 28 #2-recommendations essentially incomplete
2 5%	1 Glasses 1 Unnecessary	2 5%	CBC normal	4 9%	1 Lang. lab. 3 Incomplete	31 70%	10 #1-recommendations (4 ECE funded, 7 ADC compl.) 28 #2-recommendations essentially incomplete
1 3%	Glasses prescribed	0		0		25 71%	6 #1-recommendations (3 ECE funded, 2 ADC & 1 private incomplete) 19 #2-recommendations esentially incomplete

TABLE 9 (continued)

HEALTH ASSESSMENT OF ECE PRE-SCHOOLERS AT CHILDREN'S MEDICAL CENTER, 1970-71 SCHOOL YEAR

School	Number Served	Well Children	Rubella Vaccine	Rubeola Vaccine	Physical Defects Discovered No.		Hearing Defects No.	
PATTERSON	30	6 20%	16 53%	0	1 3%	Birth defects clinic	2 7%	2 normal
RUSKIN	26	3 12%	9 35%	0	3 12%	1 cardiac, 1 otitis media, treated	2	1 normal 1 loss
LOUISE TROY	65	7 11%	32 49%	0	10 15%	T&A myringatomy compl., 1 scheduled T&A, 2 orthopedic-treated, 1 cardiac evaluated, 3 hernias-surgery not recommended	10 15%	9 normal 1 incompl.
VAN CLEVE	35	8 23%	16 46%	5 14%	3 9%	2 T&A myringotomy needed-application SCCS--others treated by physician	4 11%	2 normal 2 losses (surgery indicated)
WASHINGTON	26	3 12%	8 31%	1 4%	2 8%	1 T&A myringotomy completed 1 T&A scheduled for summer	1 4%	1 normal
WEAVER	46	5 11%	19 41%	7 15%	8 17%	1 cardiac-no follow-up 2 orthopedies-incomplete 1 cardiac-treated; 1 hernia evaluation-incomplete, 2 tonsillitis-incomplete 1 severe burn-treated	5 11%	2 normal 3 losses
WESTWOOD	44	4 9%	13 30%	2 5%	5 11%	2 tonsillitis-no treatment	4 9%	4 normal
WHITTIER	32	4 13%	14 44%	4 13%	6 19%	3 circumcision pending 3 tonsillitis-no treatment	5 16%	3 normal 1 loss 1 moved
WOGAMAN	35	8 23%	26 74%	0	5 16%	5 cardiac-treated, 1 hernia-surgery this summer, tonsillitis, 1 glycosuria (diabetic)	0	
TOTAL	1106	155	562	43	171		185	
PERCENT		14%	51%	4%	15%		17%	

Vision Defects No.		Abnormal Hematocrits No.		Speech Evaluation No.		Dental Caries No.	(#1-most urgent #2-less urgent)
3 10%	1 Glasses prescribed 1 Surgery this summer 1 Moved	0		1 2%	Language class	23 38%	4 #1-recommendations (3 ECE funded, 1 private) 19 #2-recommendations essentially incomplete
2 8%	1 Moved 1 Glasses	0		0		21 81%	8 #1-recommendations (5 ECE funded, 1 private, complete 1 ADC & 1 private, incompl.) 13 #2-recommendations (essentially incomplete)
9 14%	6 Glasses prescribed 5 Incomplete	3 5%	2 CBC normal 1 Incomplete	0		31 48%	2 #1-recommendations (1 ECE funded, 1 ADC incomplete) 29 #2-recommendations (5 ECE funded, 24 incomplete)
2 6%	1 Glasses prescribed 1 Unnecessary	0		1 3%	Incomplete	23 66%	6 #1-recommendations (1 ECE funded, 2 private & incompl. 3 ADC incomplete) 17 #2-recommendations incompl.
3 12%	3 Glasses prescribed	0		2 8%	Language classes	13 50%	4 #1-recommendations (1 private complete, 1 private incompl. 2 ADC incomplete) 9 #2-recommendations essentially incomplete
4 9%	2 Surgeries 2 Glasses prescribed	0		1 2%	Incomplete	36 78%	7 #1-recommendations (6 ECE funded, 1 ADC incomplete) 29 #2-recommendations essentially incomplete
3 7%	3 Glasses prescribed	0		0		31 70%	11 #1-recommendations (9 ECE funded, 2 ADC 1 completed) 20 #2-recommendations essentially incomplete
2 6%	2 Glasses prescribed	2 6%	1 Moved	3 9%	2 Incompl. 1 Language lab.	21 66%	6 #1-Recommendations (6 ECE funded, 1 private & 1 ADC incomplete) 15 #2-recommendations essentially incomplete
1 3%	Glasses prescribed surgery this summer	1 3%	CBC normal	2 6%	1 Language lab. 1 Incomplete	23 66%	7 #1-recommendations (4 ECE funded, 1 private complete, 2 private incomplete) 16 #2-recommendations essentially incomplete
69 6%		22 2%		36 3%		743 67%	

PARENTS HELP CHART THE COURSE FOR ECE

Since the inception of the Dayton preschool program, a well-organized parent program has operated in each center, with the dual purpose of assisting the centers in optimal functioning and of meeting the needs and developing the interests of the parents themselves.

During 1970-71, the parent program was extended to include a Parent Advisory Council which met monthly from its first meeting in December 1970 to the last meeting in July. The Council was organized to include one parent from each center, the parent program consultant, the ECE coordinator, and the associate director of Special Assistance Programs. Purposes of the Council included sharing of information about the Early Childhood Education Program, becoming aware of mutual problems, and seeking for solutions.

The measure used to determine the extent of parent participation in Council meetings was the number of centers represented at the 6 meetings when counts of parents present were made, and the resulting percentage of attendance by priority groups. Some representatives generated such enthusiasm in Council meetings that more than one person came with them to some of the monthly meetings. This count is given in Table 10 on the next page, with the centers divided according to Priority Groups as follows:

Priority Group 1: Irving Emerson Edison
MacFarlane Louise Troy McGuffey

Priority Group 2: Weaver Greene Jackson Primary
Huffman Highview Wogaman
Whittier Hawthorne Ruskin Longfellow

Priority Group 3: Jane Addams Westwood Drexel
McNary Franklin Van Cleve
Washington Gardendale Patterson

It will be noted from the following table that the ECE Program as a whole had 64% of its centers represented on the average. Weaver, Highview, and Patterson were represented at the 6 meetings at which a participation count was made.

The same delegate from Highview had the distinction of being in attendance at every one of the 6 meetings, while the same delegates came 5 times each for Patterson and Weaver. Other centers registering at least 4 meetings each for individual delegates were Irving, MacFarlane, Emerson, Edison, Huffman, Jackson Primary, McNary, Franklin, and Gardendale, a very good record.

TABLE 10
EXTENT OF PARTICIPATION OF PARENTS REPRESENTING ECE CENTERS IN PARENT ADVISORY COUNCIL MEETINGS*

			Representation at Parent Advisory Council		
Month	Priority Group	Number of ECE Centers in Group	Number of Centers Represented	Per Cent of Centers Represented	Number of Parents Attending PAC Meetings
Dec. 1970	I	6#	3	50%	3
	II	10	7	70%	10
	III	9	7	78%	10
	All	25	17	68%	23
Feb. 1971	I	6	6	100%	9
	II	10	9	90%	13
	III	9	9	100%	13
	All	25	24	96%	35
March 1971	I	6	6	100%	6
	II	10	9	90%	9
	III	9	8	89%	8
	All	25	23	92%	23
May 1971	I	6	4	67%	4
	II	10	4	40%	4
	III	9	5	56%	5
	All	25	13	52%	13
June 1971	I	6	3	50%	4
	II	10	4	40%	8
	III	9	5	56%	10
	All	25	12	48%	22
July 1971	I	6	2	33%	2
	II	10	3	30%	4
	III	9	1	11%	3
	All	25	6	24%	9
AVERAGE OF SIX MEETINGS	I	6	4	67%	5
	II	10	6	60%	8
	III	9	6	67%	8
	All	25	16	64%	21

* No counts of participation were taken in January and April PAC Meetings
# Children's Services not added in for participation by centers

TABLE 11

ASSESSMENT OF ECE PARENT PROGRAM IN TERMS OF FEDERAL GUIDELINES FOR PARENT PARTICIPATION

Federal Guidelines*	ECE Parent Program Activities
A. Parent involvement--an important means of increasing effectiveness of programs under Title I. Each application . . . shall describe how parents of the children to be served were consulted and involved in the planning of the project, and shall set forth specific plans for continuing the involvement of parents.	Parent program operating in every ECE center. Parent Advisory Council formed. Minutes of Parent Advisory Council included in project application 1972. Parent program in the ECE budget indicates continuing involvement of parents.
B. Establishment of a council in which parents of educationally deprived children constitute more than a simple majority. 1) Selection of parents to the parent council who are representative . . .	ECE Parent Advisory Council held monthly meetings from December 1970 to July 1971. Ratio of parents to staff members was 25 to 3. Each center was invited to send a council delegate chosen from parents of children participating in ECE.
2) Title I information to be furnished free of charge to council members.	January 15, 1971: ECE Pictorial Booklet Federal Guidelines for Parent Involvement ECE Program Application Special Assistance Directory March 12, 1971: Program Narrative Advisory Statement on Development of Policy on Parental Involvement in Title I ESEA Projects Use of Title I funds to purchase clothing Welfare Rights Workshop on Title I Rationale Against the Utilization of Title I funds for Different Programming May 14, 1971: Showing of film, TITLE ONE June 11, 1971: Guidelines for Parent Advisory Council
3) Presentation of plans for future Title I ESEA Programs.	The 1971 Summer Program was presented to PAC on March 12, 1971. Anticipated changes for 1971-72 in the carrying-out of the ECE program were presented to PAC on June 11.

* Abstracted from Federal Register, Vol. 36, No. 81, April 27, 1971

TABLE 11 (continued)
ASSESSMENT OF ECE PARENT PROGRAM IN TERMS OF FEDERAL GUIDELINES FOR PARENT PARTICIPATION

Federal Guidelines*	ECE Parent Program Activities
3) Presentation of plans for future Title I ESEA Programs.	ECE Program Application for 1971-72 was presented for reading and discussion on July 21, 1971.
4) An adequate opportunity to consider the information available concerning the special educational needs of the educationally deprived children residing in the project areas, and the various programs available to meet those needs, and to make recommendations concerning those needs . . .	In discussing the operation of the ECE program at the first meeting on Dec. 11, the parents presented many ideas, concerns, and suggestions. Progress reports on these points were made at several later monthly meetings. (See Table 12) A discussion of children's needs was held at the April meeting, and one on needs of parents at the May meeting. At the latter meeting, the compiled list of the needs of children and youth was distributed and approved with a few changes. The listing of parents' needs was mailed to council members, with no change suggested by them.
5) Opportunity to review evaluations of prior Title I programs . . .	The ESEA Resumé, ESEA Project Reports 1970 were made available to PAC, as the current document will be.
6) Specific provisions in each project area for informing and consulting with parents concerning the services to be provided for their children.	PAC delegates were urged to discuss needs and program with other parents in their centers and to bring back suggestions to the PAC.
7) Adequate procedures to insure prompt response to complaints and suggestions from parents and parent council.	Teacher relationship with individual parents and parent group in ECE Centers has been emphasized, with most matters being handled on this level. Operational suggestions were effected through the PAC.
8) Opportunity to present views concerning the application . . . and opportunity by the parent council to submit comments to the State educational agency concerning the application at the time it is submitted.	Parents have had continuing opportunity to work with staff in pre-school program development. PAC reviewed program application at July meeting, discussed it, and authorized PAC chairman to sign it, indicating council approval.

Federal guidelines on parent involvement in Dayton's Title I program appear to have been followed to the letter during 1970-71. Even before the appearance of these guidelines, parent activities in the ECE program were being carried out in the same spirit of maximum involvement of parents in the program.

Another dimension in assessing the work of the Parent Advisory Council concerns the disposal of suggestions made by parents. A tabulation of these occurs in the following table, along with a notation of their implementation.

TABLE 12
SUGGESTIONS FOR IMPROVEMENT MADE BY PARENTS THROUGH THE PARENT ADVISORY COUNCIL

Suggestion	Implementation
1. More space is needed for parent programs at Highview and Whittier schools.	Highview scheduled to receive more desirable space for parent program. No center at Whittier Middle School in 1971-72.
2. Consideration should be given to continuing the care of children under one year of age during parent meetings.	More toddler aides were hired.
3. More sewing machines are needed for the various parent centers.	8 more sewing machines ordered. A successful Style Show was planned and executed by PAC on May 19, 1971.
4. Parents must be helped to become acquainted with one another before beginning various projects. Time should be taken to just get acquainted and visit.	Get-acquainted or organizational meeting to occur before election of PAC representative in the fall. Visiting time allowed in each meeting. Small discussion groups in PAC could be a model for parent programs in centers.
5. The parent activity day should not have a (school room) class atmosphere.	In most cases, this does not prevail.
6. Parent groups should visit one another and become acquainted. Also, ideas could be shared, or parents from one school could be instructors for school visited.	Plans to visit an ECE center across town can be made through the office of the ECE coordinator. By the Feb. meeting, Highview had visited Irving.
7. The fathers should be involved in the classroom with the children.	A few fathers do participate in some centers. More would be welcome.
8. The parents would like to have cluster meetings in order to become acquainted with parents from other schools.	Several cluster meetings will be planned for 1971-72.
9. A few night meetings should be held in order for working parents to join in.	Some evening meetings will also be planned for 1971-72.
10. The teachers should be certain to invite and urge parents to visit and participate in their children's classrooms.	In the coming year, teachers will be urged to make home visits. Parents will help in recruitment of children.
11. Parents and the parent assistant should have planning sessions when parents could express ideas for the sessions.	Recommended to all centers.
12. PAC representatives should be elected, not chosen in some other manner.	Representatives and alternates to PAC will be elected for 1971-72, and will be responsible for bringing parents' ideas to PAC.

ECE Parent Centers and Activities

Heart of the ECE Parent Program was the on-going parent activity in the ECE parent centers. A room at each school was set aside for the parents' own purposes and activities which ranged from crafts to meetings on child development in a series of weekly meetings planned jointly by parents and the parent assistant employed for the center. Teachers and social workers sometimes attended the monthly planning sessions. Each center's activities reflected the particular interests and concerns of the parents of children in the pre-school program.

The parent meetings became an avenue for information concerning the children's experiences in pre-school, with suggestions for ways parents could aid children's mental and emotional growth at home. With pre-planning, some parents participated in the classroom with such activities as helping with snacks, reading a story, or going on field trips with the children and staff.

Activity meetings relating directly to children's needs included workshops for parents to make things children could use at school or at home; sewing, mending, or altering clothes for children; nutrition sessions on the preparation of inexpensive, nutritious meals; and other special interests relating to children.

Parents were also invited to the center for conferences with ECE personnel: teachers and aides, the nurse, or social worker. Occasionally, also, the social worker visited the home for the following purposes: 1) initial enrollment of the most needy children; 2) immunization requirements and their necessary completion; 3) explanation of the ECE comprehensive health program for each child (medical, dental, speech, and hearing examinations at Children's Medical Center); and 4) follow-up of the health assessment program.

In charge of the overall parent program was a parent program consultant who had been an experienced social case worker. She was assisted by 8 full-time parent assistants and 1 part-time parent assistant. Two of the parent assistants in their second year of service were welfare recipients selected from the neighborhoods of the centers they served.

PILOT OUTREACH PROGRAM TOUCHES MORE HOMES

In spite of all efforts, some parents hold back from participation in the Early Childhood Education Program. The Outreach Program was designed as a pilot program to attempt to go directly to those parents of the Irving ECE center, to help them to know how to help their children.

The Outreach team included the consultant for the Outreach Program, one Outreach aide, the two ECE teachers, one social worker, and one curriculum consultant. Names of 17 non-participating parents were given to the social worker who decided which parents might be receptive to interest and offers to help. The pre-school teachers diagnosed which social, emotional, or perceptual skills needed strengthening for each child whose parents were on the list. The Outreach consultant worked with the Outreach Aide in the selection of the chosen materials for use in the home. Being also in charge of the parent activities at Irving, the Outreach aide visited all the homes of the ECE children and spent one day a week at the center working with the parent program.

Due to family mobility, unfavorable home situations, or other reasons, the list of 17 was reduced to 11 homes where the Outreach aide gave direct assistance. On the first visit, the Outreach aide established rapport and set a regular time for working together. On the second visit, the Outreach aide and the parent worked with the materials to be used to help the child. Return visits were determined by progress in each case. The Outreach aide kept an anecdotal record for each child and parent in the Outreach program, noting areas that needed strengthening, the materials being used, and observations of home atmosphere, etc. As the teachers kept in daily contact with the Outreach aide, she also noted their observations about the child's progress.

Some parents needed little assistance from the Outreach aide after understanding what they could do to help the children. Other visits continued until the end of the year. The Outreach pilot program succeeded in helping more parents to know of ways they could help their children with learning activities and experiences.

CARE OF TODDLERS AND TOTS SUPPORTS PARENT PROGRAM

While parents engaged in parent activities at the ECE center, the ECE Toddler Care Program provided parent program aides to supervise the children whose ages ranged from one through five in the 26 centers. (Occasionally kindergarten children came along with their mothers, thus accounting for the 5-year-olds.) Attendance reports showed a duplicated total of 3,895 children thus supervised during the 1970-71 school year.

Holding similar objectives to those of the pre-kindergarten classes, the Toddler Care Program put forth efforts to foster growth in perceptual, motivational, and social skills. In both mid-morning and mid-afternoon, a snack of cereal and milk was provided.

A Toddler center was located in a central area for three ECE centers, being in operation on Tuesday, Wednesday, and Thursday each week. Toddler aides were given in-service training on Monday, and engaged in additional workshops on use of materials and child development. They were responsible for reporting suspected cases of child neglect to the ECE social case worker assigned to a center and sometimes suggested special health concerns to the ECE nurse.

Toddlers attending the ECE centers were often included in the center's schedule of activities that day, thus affording very early experiences in taking field trips, looking at movies, and participating in group activities. Whenever very few three and four-year-old toddlers were brought into the Toddlers center, they were placed in the regular pre-kindergarten classroom for that session, while, for that day, the Toddler Care aide served as a classroom teacher aide. Once a month, in each of her 3 centers, the parent program aide was scheduled to serve as a classroom teacher assistant, thus becoming familiar with the regular pre-kindergarten program. Whenever there were too many children for one person to supervise in Toddler Care, assistants were on call.

Experiences of young children in their occasional visits to the Toddler Center have provided a bridge to good adjustment when they enroll in the ECE preK program, as well as demonstrating to parents ways of helping children grow.

DOOR TO SOCIAL SERVICES IS OPENED TO FAMILIES

Social services, as one component of Early Childhood Education, had objectives and goals that were supportive of the overall ECE program. Methods and techniques were designed to enable individuals, families, and groups to attain more effective levels of functioning by utilizing needed community resources. This was the work of the 11-member social services staff, under the direction of the social services consultant who gave guidance to the staff in carrying out their services to ECE families in a casework approach.

The social services consultant participated in planning for overall staff development as well as in working out evaluations at the program year termination. The services of the 11 social case workers were distributed among the 25 centers.

In the selection of enrollees in ECE, according to the established criteria, public welfare and other community services agencies were solicited for referrals. In instances where referrals failed to bring about the enrollment quota for a given center, social workers canvassed neighborhoods to find eligible children.

Early in the year, each social worker established regular conference times with teachers, as well as arranging for periods when she could be involved in the center to establish meaningful relationships with the children in order to assess individual needs. Within the ECE center, the social worker was viewed as a member of the team, bringing special skills in the understanding of human growth and development, skills in interviewing, and skills in the identification of special problems which interfere with healthy adjustment.

Referrals were solicited from teachers of children whose behavior interfered with their own or others' adjustment. These problems were explored by the social worker in visiting within the family unit, soliciting the help of the family in their solution, in the belief that, in order to help the child toward better adjustment, all of these persons must be seen in their own environment.

The basis for this approach is founded in the theory that change in behavior patterns cannot be directed exclusively toward the individual, without considering his interaction with others, especially within the family.

Recommendations were brought back to teachers, along with interpretations of the family functioning, thus enlarging the teachers' perceptions of the needs of individual children.

In some instances, social workers organized small groups of mothers for guided discussions around mutual problems. This purposeful group experience and sharing of ideas appeared to enhance social functioning of the group.

During the year, social workers screened a total of 1,106 children for the medical assessment at Children's Medical Center. Following the assessment, the social workers participated with the medical staff in planning follow-up care for 951 children who had had significant findings in health problems. Follow-up meant contact with each parent for interpretation of findings. In many instances, the social worker provided transportation for the children's follow-up appointments with doctor or dentist.

To assist the psychological evaluation administered by the research specialist, social workers administered some of the pre- and post testing of kindergarten children.

In helping to open doors to needed services, the indications are that the social services component has provided a comprehensive program helpful to children and their families.

AN EVALUATIVE STATEMENT CONCERNING DAYTON'S EARLY CHILDHOOD EDUCATION PROGRAM

The total number of children served in the pre-kindergarten program was larger for the 1970-71 school year than in any previous year (TABLE 1). Yet the enrollment was less than 90% of the projected enrollment of the date of application. A few centers fell as low as enrolling only about 50% of those for whom the program was planned. Without exception, the Priority III Centers took full advantage of enrolling the number of children allowed (TABLE 2). The latter group of 9 schools also had the highest percentage (54%) of children who were actually present in the program for at least three-fourths of the days it was in session. Less than 40% of the enrollees of the other 17 centers had the benefit of at least three quarters of the program year (TABLE 3). Mobility of participants was found to be one cause for this lack of participation on the part of so many children, for a least 12% moved out of the center area during the year (TABLE 4), thus withdrawing from the program. In a few instances, the per cent of attendance for the ECE center was higher than the attendance rate for the kindergarten in the same school (TABLE 5). There is evidence that, during 1970-71, the ECE program served from about 30% to 90% of the potential number in the center area, if we may assume that this number would be very near the number enrolled in the first grade (TABLE 6). All of these ways of looking at the number of children per 100 who were inside the Early Childhood Education doors during 1970-71 should be studied by the ECE planners with a view to making a more intensive contribution to the community.

The priorities set by the teachers themselves in listing needs (TABLE 7), indicates the concern and understanding which they have for this problem. In the Parent Advisory Council, parents also were asked to list needs of children. An awareness of the needs of three- and four-year-olds has led to the explicit definition of the "specific behavior characteristics" which the ECE program has set out to encourage. These contribute to program validity.

Although responsibility is specifically designated for each position in ECE, staff members operate as teams in meeting children's needs. A substantial amount of time is given to in-service training, so that teachers, assistant teachers, and aides may improve their services to children.

Careful records being kept by the ECE nurse and others led to the detailed health assessment chart (TABLE 9, pages 34-39). The greatest incidence of health problems for these children appears to be dental caries, with two of every three children being found to need dental care. Although other health problems were not so widespread, diagnosis and proper care have been important to each individual's welfare.

In its first year of organization, the Parent Advisory Council had better representation in its earlier meetings than in the late spring and summer. Election of representatives, as suggested by the members of PAC, may help to increase the percentage of attendance at PAC meetings. The Parent Program fully meets the federal guidelines for parent participation. During the year, the ECE staff made efforts to implement the suggestions agreed upon by parents at the Parent Advisory Council meetings (TABLE 12). The Parent Program has been planned to serve the needs of both the pre-school program for the children and the interests of the parents themselves, as well as providing ways for parents to better help their children in the home. The organization of the Pilot Outreach Program, of the Toddler Care Program while parents are at the ECE center, and of the social workers' contacts in the homes of the children enrolled in ECE, all combine to help support the program objectives.

Both the sensorimotor program and the NEW VISIONS Museum for Children have received national attention in publications, as has the overall ECE Program. The curriculum of ECE has been well designed to meet children's needs and to foster their growth and development.

Although only cognitive aspects of the program have been measured in the Psychological Evaluation, a glance at Figures 3 and 4 in that report shows that ECE children measure up very well with the average at the program's end.

MAJOR SUCCESS OF THE TITLE I PREKINDERGARTEN PROGRAM
(A Montage of Teacher Opinion)

The one most outstanding success for prekindergarten children in the Early Childhood Education Program has been a total improvement in self-image, self-worth, and self-confidence--in short, how the individual child feels good about himself as he grows and develops mentally, emotionally, physically, and socially throughout the year. This happy "success" feeling is not only important in day by day opportunities, as the child learns and discovers at his own rate, expanding his interests while engaging in exciting and stimulating activities, but, hopefully, it leads to a positive feeling about himself that will enable each child to be better able to cope with any new situation and, thus, will provide him with a basis for successful school achievement.

By the frequent praise and extra attention he receives in the ECE Center, the child responds in a positive manner. The way his eyes light up, the way he smiles, all show that he feels self-confident and satisfied with himself.

> "Last fall, so many children came to us with the idea of not being able to do things for and by themselves. 'I can't work a puzzle. You help me.' 'I can't build a house--you do it for me.' 'I can't stack those rings--I don't know how." Today we hear: 'Teacher, you want to watch me do this puzzle', and Jerry works four or five puzzles (10 to 18 parts) in a short time. Gene and Mike call, 'See this airplane we made? Bet you can't make one this good.' Tony comes up and says, 'Want to hear me sing, teacher? I thought up a new song.' Shawn and Michelle inform us someone broke the toaster, but they smile and say, 'Don't worry, teacher, we can fix it!'"

To see shy, introverted children who were completely withdrawn, unable to help themselves and others, open up as they relate to their peers and adults with a positive attitude of confidence and pride is a sure indication that the program is successful and needed.

> "Last September John was tense, frustrated, unable to speak more than a word or two. Today he comes in grinning, saying 'Teacher, see my pants? They're new and they're blue. My shirt is red, ain't it?' Maybe he still has his colors wrong--but he is happy, vocal, able to cope with a school situation, and he wants to learn!"

Directly related to children's feelings of self-worth and adequacy is the children's improved ability to express themselves and communicate. As they begin to verbalize more, they interact more with each other and have increased attention spans.

> "Tonya and Bridget were shy last September, afraid to play, move or talk. Now they rush to the housekeeping center and begin planning their dinner! They have lost their fears and timidity. Tony grabs a truck and actually plays and talks to the other children--last September he was both a non-talker and non-participator! Now he feels at ease with his school friends."

> "Johnny was a challenge to us from the first day he entered pre-kindergarten. He seemed not to see or hear us when we said, 'Good afternoon, Johnny,' or even during circle time or during small group time. Repeated efforts to obtain a verbal response were unsuccessful. Thinking maybe Johnny had a hearing problem, we began to observe him more closely and found that he did talk to one little boy in his class. This meant that hearing was not Johnny's problem. Refusing to admit defeat, we tried many things to elicit a response from Johnny. One day near the end of the first semester, Johnny came in and surprised us by saying cheerfully, 'Good afternoon!' We felt as happy as if we had just discovered two Saturdays in one week!"

> "When Khushwant first came into our room, we had to look behind his mother to see him. Neither of us had ever seen a more shy, bashful child. To make things worse, he was wearing a full cast on his left arm. He wouldn't leave his mother's side for any reason. He and his Indian family had been in this country only six months. Here we knew we had a language problem; his father spoke English fairly well, his mother not at all well. Both parents were very cooperative. Little by little, we communicated, until now Khushwant is very independent, well-liked by his classmates, and relates well to both his peers and teachers. We watch and are very happy, because Khushwant himself is a major success!"

As many factors contribute to a child's feelings of self worth, so the ECE program staff all contribute in providing the conditions which build a positive self-concept.

> "Nathon came to us as a very insecure child whose only means of communication were grunts and pointing. With the help of our social worker, speech therapy was prescribed at Children's Medical Center. Likewise, with the aid of our Language Master and the guidance of Norman Coleman, a high school aid, Nathon gained confidence in oral expression. He now uses small sentences rather than pointing. Instead of standing in a corner crying as he did in the beginning, he is a more cheerful and contented child."

> "A very significant success in our center was our deep concern for Marvin, a non-verbal child whose poor attendance, physical neglect, and home environment gave us reason to believe, after many conferences with the mother, that direct contact with our social worker and community resources were required. After conferences with the mother and all involved (Model Cities coordinator, social worker, case worker, and teacher), the

> results were amazing! Relocating the family caused a positive and hopeful attitude in the mother, better attendance, and a very verbal child who gradually had a better feeling about himself."

> "Joe Henry, who came to us in the beginning of the year, had a very hard time adjusting to school as well as to the city after moving here from the South. His father was unable to locate work causing the family to be very needy in some respects. This little fellow had received an electrical burn to his mouth which had not been treated by medical care because of the family's financial problems. When the school staff saw him at school with such a raw looking place on his face, we immediately contacted our social worker who was able to arrange emergency care at the Children's Medical Center for him. She also aided the family in securing ADC funds, as the father had been unable to obtain full time employment. Their Christmas became a pleasant one through our efforts of obtaining and giving food. Our social worker was able to obtain toys for the children. The mother has a new baby in the home. To show her appreciation, the mother offered to help us with house cleaning during the time we were home for Spring vacation. Joe Henry is a happier child, intensely motivated, the only one of his class listed under 'marked improvement'."

Direct work with the parents at the center and in the home often is the key to a child's motivation and happiness.

> "Upon the request of a parent, we received a child who had spent last year in another classroom failing to verbalize or participate in activities. Realizing that the child possessed the ability to speak, but wouldn't, we began working with him and the mother. Thus, through parental interest and cooperation, we now have a happy, cooperative, well spoken youngster."

Sensitive to the needs of the unloved and the unlovable, prekindergarten teachers seek to reverse these terms.

> "David entered our room after a summer of Headstart. He was untrusting, belligerent, restless, and often given to throwing irons, blocks, or whatever was close when he was angry. Turning over large wooden dividers meant nothing to him. Through the year, we have worked to give David the physical and emotional love he so desperately needed. (There is no mother in the home.) While setbacks still occasionally occur, his 'recovery period' is so much shorter. He is more able to take needed discipline, and is beginning to discipline himself. His attention span has increased greatly. He has a beautiful sense of humor. We are so pleased with his development. And he hasn't thrown anything for weeks! We feel that consistent love and consistent discipline have made up the winning combination for David's success in becoming a lovable person."

As teachers note each child making progress, with some children making really big changes, they know that the Early Childhood Education Program is a success. Children seem to enjoy everything and feel very secure at the center. All children have been helped in purposeful independence, as evidenced by the ones who, in the beginning, wanted their parents to stay, later go right ahead with activities.

PSYCHOLOGICAL EVALUATION OF ECE FY 1971

John A. Davis, Research Consultant

Division of Research
MANAGEMENT SERVICES DEPARTMENT

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PSYCHOLOGICAL EVALUATION

A Component of EARLY CHILDHOOD EDUCATION PROGRAM
ESEA Title 1, FY 1971

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PSYCHOLOGICAL EVALUATION OF ECE PROGRAM

The EARLY CHILDHOOD EDUCATION program in the Dayton School District has now completed its sixth year of operation. During those six years several thousands of children have taken part in the program, the majority of them now being enrolled in schools within the Dayton School District. The present evaluation report represents a continuation of the program assessment model initiated in the 1968-69 school year which was designed not only to evaluate the effects of the ECE program on children then enrolled, but began to consider the longer term effects, i.e., upon entrance into and at the completion of kindergarten. In the 1969-70 school year, children were evaluated into the first grade and plans were made at that time to follow the progress of those same children into the second grade, while following succeeding ECE enrollees during their kindergarten and first grade experiences.

In view of the increasing evidence concerning the short-term effects of pre-kindergarten experiences following children's entry into the typical public school system, it is of considerable interest and importance to assess not only the immediate impact of the pre-school program upon the children enrolled, but to assess whether the program has any lasting effects and, if not, why. Thus, the present evaluation includes both cross-sectional and longitudinal approaches. In view of the present results and the marked attrition of children in the several grade samples, particularly the second grade, it is not planned to follow children beyond that point in future studies. However, the striking results from the kindergarten sample merit continued evaluation of that group; the present first graders will probably be assessed further next year. The experiences during the three years have demonstrated the need for considering additional facets of the program, some of which will be discussed later in this report.

The assessment during 1970-71 followed the same format as presented in the previous years. The present report will cover four phases:

1. A sample of four-year-olds currently enrolled in ECE, including a subsample of children who had been in the program for two years, entering first as three-year-olds.
2. A matched sample of kindergarten children with and without ECE experience.
3. A sample of first graders with and without ECE experience, previously evaluated in kindergarten.
4. A sample of second graders with and without ECE experience, previously evaluated in kindergarten and the first grade.

I. PSYCHOLOGICAL EVALUATION OF FOUR-YEAR-OLDS

During the 1970-71 school year, a total of 1,654 children was enrolled in one time or other in the Dayton School District's ECE program. These children attended classes in 26 different centers. Since it was obviously not possible to evaluate all children in the program, a modified random sampling procedure was used which included children from each of 22 centers. Three of the four new centers (Franklin, Patterson, and Van Cleve) were not operative when the pre-program evaluation was scheduled and could not be included in the sampling.

An additional factor was chosen this year to classify children and to investigate for possible differential effects. In the previous year, a large enough number of three-year-olds had been enrolled to make it feasible to consider the important variable of length of time in the program, if enough of that number re-enrolled during the current year. As it developed, a reasonable number of re-enrollees was available and length of time in the program (one year vs. two years) was added for investigation to the factors of race and sex.

A pre- and post-evaluation design was used again since the objective was to assess changes occurring during the time period which could reasonably and logically be attributed to the program itself. As in past years the lack of a control group was recognized as a limitation in evaluating the results, but results from other studies, the kindergarten evaluation, and one internal check will be offered as evidence of the program's effectiveness. The several confounded extraneous variables discussed by Campbell and Stanley(1) in their critique of this design are acknowledged, but are felt to have been distributed randomly over the several groups in the factorial design. The inability to obtain a control group was due again to the practical limitations imposed in locating similar groups of children not enrolled in the program, to have them available for both pre- and post-testing, and the cost factor in time, effort and money in locating, evaluating and compensating such children. It is now a very real problem in the Dayton School District to find children comparable to those who would be selected for the ECE program who are not already enrolled in it or a similar program.

Theoretically, children enrolled in the ECE program who fail to attend on a fairly regular basis are terminated after investigation demonstrates that the absenteeism is not due to circumstances beyond their control (e.g., illness, transportation problems, etc.). They may be replaced with other children who are on a waiting list for certain schools which typically are over-enrolled. As was discovered last year, a number of children with frequent absences continued in the program and 28 in the original sample were available for both pre- and post-evaluations. Out of a possible 135 days, 30 or more days of class absences was chosen arbitrarily as the cut-off point to be included in this quasi-control group. Children in this group of 28 missed an average of 42.3 days of school with a range of absences from 31 to 72 days.

It was not possible to find matches of seldom-absent children for these 28 children using the three major factors (sex, race and one or two years in the program) because of the unusually high absentee rate in the categories having re-enrolled children. In last year's evaluation, a child's name was chosen from the same school and category whose name was nearest that to the child in the high absence or control group on the original list of those chosen. Since it was not possible to carry out that type of desired match, children in the low-absence group were chosen who missed the fewest days of school. Thus, they were not necessarily matched for all of the major variables, especially whether they were re-enrollees or not, and for schools. The matching procedure was not the most desirable, but was based upon practical considerations; the low rate of absence became the overriding factor for selection. Children in the low absence group missed an average of only 1.2 days with a narrow range of only 0 to 3 days of absence.

Included in the "control" or low absence group were 9 white male "new" children; 4 white female re-enrollees; 4 white female "new" children; 1 Negro male re-enrollee; 3 Negro male "new" children; 4 Negro female re-enrollees; and 3 Negro female "new" children. They came from 16 different schools with a total of 17 of the sample being white and 11 Negro. Only 9 of the total were re-enrollees. Included in the high-absence group were 5 white male re-enrollees; 3 white male "new" children; 5 white female re-enrollees; 2 white female "new" children; 1 Negro male re-enrollee; 3 Negro male "new" children; 5 Negro female re-enrollees; and 3 Negro female "new" children. In this total group were 16 white children and 12 Negro children from 15 different schools; 16 of this group came from the re-enrolled categories.

Although the original list of three-year-olds included approximately 300 who might re-enroll, they were not even then equally divided among Negroes and whites and among boys and girls. After the actual enrollment took place in the late summer and in September, 1970, only 93 of that number were actually enrolled. Despite the risks involved, it was decided to proceed with length of time in the program as one of the variables, since such a comparison was of considerable practical interest. There were originally available for pretesting only 20 white boys, 17 white girls, 24 Negro boys and 32 Negro girls. Based upon previous experiences, it was anticipated that an attrition rate of 25 to 30% or more would occur due to moves out of the school district and, in the case of white children, usually out of the state.

Children for the pre-testing sample were chosen randomly within the parameters of the experimental design which considered sex, race, and length of time in the program, as possible influential variables. The initial sample consisted of 242 children. "Over-testing" was done in order to compensate for the anticipated losses. While losses due to moving were less than predicted this year, excessive absenteeism combined with moving and withdrawal from the program among children in certain critical categories (e.g., the white male and female re-enrollees) limited the final analyses to 88 children. In the re-enrollee categories of an original 20 white boys, 2 dropped out of the program and 6 had more than 30 days of absence each, the total group of 18 averaging 25 days absent. Among re-enrolled white girls, of the original 17, one withdrew from the program and 5 of the remaining 16 were absent more than 30 days. Among the 32 Negro girl re-enrollees, 4 withdrew and 5 missed more than 30 days; among the 24 Negro boys, 2 withdrew and 1 missed more than 30 days.

In order to maintain equal numbers in each of the eight categories and not have to estimate data, the 11 remaining white female re-enrollees determined the size of the final sample available for analyses. All 22 centers were still represented among these 88 children although some schools were represented by only one or two children.

Each child was administered seven different tests or criterion tasks. Since one of the major objectives of the ECE program is to increase the use of language and communication skills, several of the tasks were directly related to the language area while the others assessed visual-motor development, body awareness, auditory discrimination, and self-control or motor inhibition. Each of these tasks was related in some way to the stated objectives of the program. As in the previous year, each child was administered in the following standardized order the Peabody Picture Vocabulary Test; a developmental Test of Visual-Motor Integration; two parts of the original Illinois Test of Psycholinguistic Abilities (ITPA): the Auditory Vocal Association Test and the Auditory

Decoding Test; the Draw-A-Line-Slowly task (DAL); an abbreviated form of the Wepman Auditory Discrimination Test; and the Draw-A-Person Test (DAP). These seven tasks were used again because each measures a somewhat different but related area of functioning associated directly or indirectly with the objectives of the program and tasks which would not be directly trained by the program. With the introduction of the Peabody Language Program in a systematic manner throughout the ECE program, the use of the PPVT as a criterion instrument perhaps becomes more subject to question under those criteria. However, the Peabody Language Development Kits do not actually train children on the PPVT, although the objectives of the Kit are to stimulate the receptive, associative and expressive components of oral language development.

All children were tested within a two-week period, approximately three weeks after classes began to be formed and had gained some semblance of order and stability, and after the children had become adjusted to the environments created by the program. Post-testing occurred within a two-week period at the end of May, 1971. The ECE program was actually continued for six more weeks, but the staff psychologists performing the evaluations would not have been available during July at the termination of the program and it was necessary to complete the post-testing at the usual time. Approximately 7 months intervened between the pre- and post-evaluations.

All testing was done by the 17-person-staff of the Psychological Services, Dayton Board of Education. All of these psychologists were thoroughly acquainted with the tasks and with the methods of administration and scoring. Each examiner scored his or her own materials with the exception of the DAP and DAL which were scored by the same person for both testings.

Description of Tasks and Scoring

The *Peabody Picture Vocabulary Test* (PPVT) purports to provide an estimate of a child's verbal intelligence based upon measuring his "hearing vocabulary." The child is not required to verbalize and may simply point to one of four picture choices when the stimulus word is given by the examiner. Scoring was done according to standards given in the manual. The ceiling is established when the subject misses any six of eight consecutive items. Raw scores were converted into both mental age and IQ scores.

The test of *Visual-Motor Integration* (VMI) consisted of a series of geometric forms to be copied by the child. The forms were arranged in order of increasing difficulty beginning with a vertical line and progressing through a horizontal line, circle, vertical-horizontal cross, right oblique line, oblique cross, triangle, open square and circle and three line cross. Each form was scored either passing or failing according to standards outlined in a simple manual developed for the purpose. A child's score was simply the number of forms correctly copied.

The *Auditory Vocal Association* (AVA) test measures the ability to relate spoken words in a meaningful way. It is basically an analogies test in which the child must complete a statement by supplying an analogous word, e.g., "John is a boy; Mary is a _______." Scoring followed the rules indicated in the ITPA manual (1961 edition) which establishes a ceiling following six consecutive item failures. The raw scores were converted into "language age" scores for computational purposes.

The *Auditory Decoding Test* (ADT) assesses the child's understanding of the spoken word and is essentially a controlled vocabulary test, e.g., "Do you smoke?" "Do you run?" Scoring was based upon the rules contained in the ITPA manual. The ceiling level is reached when four in any eight consecutive items are failed. The raw scores were converted into "language age" scores for computational purposes.

The Draw-A-Line-Slowly (DAL) task, devised by Maccoby, consists of asking the subject to draw a line as slowly as possible. Materials required are an 8 1/2 x 11" piece of plain white paper and a crayon or primary pencil. The examiner gives the child two separate examples, one demonstrating the concept of fast and the other slow, after which the child draws the line according to the directions. The last two trials are used as test trials with instructions to draw the line as slowly as possible. The time it takes to draw the line between two dots (eight inches apart on the page) is used to compute the criterion score. A rate measure was used for this task, i.e., length of line divided by time to draw the line. The average of the two trials was then used to obtain a more stable measure. This task measures motor inhibition or self-control and has also been found to be correlated with intellectual measures.

The Auditory Discrimination Test is a test designed by Wepman consisting of 40 pairs of words which the examiner reads aloud. Some of the pairs of words are alike and some are different. The task of the child is to respond in some way that the words are the same or different. The original list of 40 pairs have proved to be too long to maintain children's interests ard attention and the list was reduced to 29 pairs by randomly choosing the "X" pairs and selecting all the"Y" pairs. The task was scored according to the number of items answered correctly and raw scores were used in computations.

The Draw-A-Person (DAP) task is one of the oldest and most widely used non-verbal tasks of intelligence which is also related to maturation and body awareness. The Goodenough scoring system outlined in her 1926 book was used and scores were converted to mental age norms as indicated in the book.

Results

The data for the seven tasks were initially analyzed using analysis of variance (ANOVA) in a 2 x 2 x 2 fixed factorial design with race, sex, and time in the program (one or two years) as the three factors, each having two levels. Difference scores between pre- and post-school evaluations were used as cell entries. Since it was of interest to know whether children who had already spent one year previously in the program as three-year-olds were performing initially at higher levels than those enrolled for the first time, the pre-program results were also subjected to ANOVA.

The results of the ANOVA on the pre-teating scores for the seven tasks (actually 8 analyses were performed since both MA's and IQ's were used for the PPVT) revealed no significant differences due only to length of time in the program, i.e., re-enrollees did not perform at significantly better levels on any of the tasks than did those who were enrolled for the first time. However, three of the tasks did show significant F-ratios for sex (1, 80 d.f., 3.96, $p < .05$ and 6.96, $p < .01$), all indicating that girls began at consistently and significantly higher levels on the test of Visual-Motor Integration, the Auditory Discrimination Test and the Draw-A-Person. Each of these differences was significant at the .05 level (VMI: F=6.250; Auditory Discrimination Test, F=5.975; and DAP, F=6.488) with girls completing 0.98 designs more than boys, correctly discriminating 3.64 more words than boys and scoring 9.3 months higher than boys on the DAP. On the Auditory Discrimination Test, there was a significant F for the interaction of sex x school (F=4.975). A review of the data indicated that the effects of a previous year in the program become apparent only when paired with the sex differences and that it was the dominance of girls' performances over boys that produced the effect.

The most significant finding from the pre-program analyses is the failure to find any statistically significant differences between "new" enrollees and re-enrollees. Although no such hypothesis was formulated for testing, it was anticipated that those taking part in the program for one previous year would enter at a higher performance level than those being admitted for the first time.

That girls initially perform on several tasks at higher levels than boys of the same chronological age is not an unusual finding and only confirms again the maturational differences and general "superiority" of girls on many developmental and intellectual tasks. It is of considerable interest to note again (as has been noted on almost every task in past reports on the pre-kindergarten program) that there are no racial or ethnic differences, suggesting once more that at this age the "culture of poverty" seems to be the overriding factor which transforms children of different "racial" backgrounds into similarly performing organisms.

The ANOVA's for each of the seven tasks, using difference or gain scores as entries, are presented in Tables 1-8. Since the same 88 children were used in each analysis, the same F-ratios apply as for the previous analyses. The most striking feature of these analyses is the presence of only two significant F-ratios, those associated with sex on the Visual-Motor Integration task ($F=7.915$, $p<.01$) and with the interaction of sex x school on the Auditory Vocal Association Test ($F=4.480$, $p<.05$). The mean difference scores on the VMI for boys and girls, respectively, are 2.30 and 1.14, indicating that boys made significantly greater gains on this particular task as compared with girls ($p<.01$). This, of course, is a reversal of the situation on pre-testing where girls demonstrated a significantly higher level of performance than boys.

The interaction of sex x school on the Auditory Vocal Association Test, while offering statistical significance, is more difficult to interpret from the point of view of making direct practical use of the finding.

The results, in general, indicate that with very limited exceptions, none of the main factors operates in any predictably consistent way, alone or in combination, to produce significant changes on most of the seven criterion tasks. Such results have been rather consistent over the past three years and suggest that the program promotes over-all growth as measured by

TABLE 1
ANALYSIS OF VARIANCE OF PEABODY PICTURE VOCABULARY TEST SCORES (MENTAL AGES)

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1.636	1	1.636	...
Sex	96.181	1	96.181	1.05
School	11.636	1	11.636	...
Race x Sex	16.409	1	16.409	...
Race x School	109.136	1	109.136	1.19
Sex x School	1.136	1	1.136	...
Race x Sex x School	163.708	1	163.708	1.80
Within	7306.656	80	91.333	
TOTAL	7706.500	87		

TABLE 2
ANALYSIS OF VARIANCE OF PEABODY PICTURE VOCABULARY TEST SCORES (IQ's)

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.920	1	0.920	...
Sex	432.101	1	432.101	2.67
School	294.556	1	294.556	1.82
Race x Sex	8.284	1	8.284	...
Race x School	468.283	1	468.283	2.89
Sex x School	10.920	1	10.920	...
Race x Sex x School	575.308	1	575.308	3.55
Within	12963.523	80	162.044	
TOTAL	14753.898	87		

TABLE 3
ANALYSIS OF VARIANCE OF VISUAL-MOTOR INTEGRATION TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.284	1	0.284	...
Sex	29.556	1	29.556	7.92**
School	1.375	1	1.375	...
Race x Sex	0.556	1	0.556	...
Race X School	5.011	1	5.011	1.34
Sex x School	4.102	1	4.102	1.10
Race x Sex x School	0.283	1	0.283	...
Within	298.725	80	3.734	
TOTAL	339.895	87		

** $p < .01$

TABLE 4
ANALYSIS OF VARIANCE OF AUDITORY-VOCAL ASSOCIATION TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.181	1	0.181	...
Sex	127.681	1	127.681	1.26
School	142.545	1	142.545	1.41
Race x Sex	28.409	1	28.409	...
Race x School	454.545	1	454.545	4.48*
Sex x School	5.500	1	5.500	...
Race x Sex x School	216.406	1	216.406	2.13
Within	8116.113	80	101.451	
TOTAL	9091.382	87		

* $p < .05$

TABLE 5
ANALYSIS OF VARIANCE OF AUDITORY DECODING TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.284	1	0.284	...
Sex	67.374	1	67.374	...
School	450.011	1	450.010	1.93
Race x Sex	54.102	1	54.102	...
Race x School	0.102	1	0.102	...
Sex x School	125.284	1	125.284	...
Race x Sex x School	459.076	1	459.076	1.97
Within	18611.699	80	232.646	
TOTAL	19767.933	87		

TABLE 6
ANALYSIS OF VARIANCE OF AUDITORY DISCRIMINATION TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	145.102	1	145.102	3.61
Sex	145.102	1	145.102	3.61
School	9.556	1	9.556	...
Race x Sex	78.284	1	78.284	1.95
Race x School	0.011	1	0.011	...
Sex x School	135.011	1	135.011	3.35
Race x Sex x School	130.101	1	130.101	3.23
Within	3219.810	80	40.247	
TOTAL	3862.979	87		

TABLE 7
ANALYSIS OF VARIANCE OF DRAW-A-LINE TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.126	1	0.126	...
Sex	0.024	1	0.024	...
School	0.314	1	0.314	...
Race x Sex	0.216	1	0.216	...
Race x School	0.003	1	0.003	...
Sex x School	0.016	1	0.016	...
Race x Sex x School	0.978	1	0.978	1.16
Within	67.715	80	0.846	
TOTAL	69.395	87		

TABLE 8
ANALYSIS OF VARIANCE OF DRAW-A-PERSON TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	33.136	1	33.136	...
Sex	147.681	1	147.681	...
School	20.045	1	20.045	...
Race x Sex	40.909	1	40.909	...
Race x School	132.545	1	132.545	...
Sex x School	368.181	1	368.181	1.41
Race x Sex x School	118.371	1	118.371	...
Within	20955.128	80	261.938	
TOTAL	21816.000	87		

the particular tasks, but that the gains cannot be attributed in any clear way to one or another of the factors considered.

It is important to point out that the amount of time children have spent in the program (one or two years) is unimportant so far as the relative amount of performance growth is concerned on these particular tasks. The main factor of schooling alone did not enter into the results and at no point was there demonstrated any superiority of two years over one year in the program either at the beginning of the ECE program or at its conclusion, some seven months later. This is a somewhat surprising finding and will be commented upon in greater detail in the summary.

TABLE 9
PRE- AND POST-MEAN SCORES AND MEAN CHANGE SCORES FOR CRITERION TASKS

Tasks	Unit Changes	Pre-School Mean	Post-School Mean	Mean Change
Peabody M.A.	Months	43.8	59.1	+ 15.3
Peabody I.Q.	Points	81.6	94.1	+ 12.5
Visual-Motor	Designs	3.8	5.5	+ 1.7
Auditory Vocal	Months	47.6	59.3	+ 11.7
Auditory Decoding	Months	53.0	61.9	+ 8.9
Auditory Discrimination	Words	14.2	18.5	+ 4.3
Draw-A-Line		1.20	0.64	- 0.56
Draw-A-Person	Months	34.8	46.8	+ 12.8

Table 9 presents the pre- and post-mean scores and the mean increases for the same 88 children on each of the seven tasks. These results clearly indicate that there was significant growth on each of the tasks.

Table 10 compares the pre- and post-mean scores and the mean change scores for the two preceding evaluations in 1968-69 and 1969-70 with the present results on the six tasks which were used in both years and on the additional task and score (PPVT IQ) used last year and the current year. It is interesting to note that on every task except the DAP and the DAL that this year's sample began at slightly higher levels than either of the previous years. The PPVT IQ pre-school measure is markedly higher (approximately 13 IQ points) although the post-school mean is only about 7 points above that of the 1969-70 group. The post -school mean scores on 6 of the 8 measures also show higher performance levels.

TABLE 10

COMPARISON OF PRE- AND POST-MEAN SCORES AND MEAN CHANGE SCORES ON CRITERION TASKS FOR 1968-69, 1969-70, AND 1970-71 GROUPS

Tasks	Pre-School Mean			Post-School Mean			Mean Change		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Peabody M.A.	40.3	40.0	43.8	54.0	55.0	59.1	13.7	15.0	15.3
Peabody I.Q.	...	69.0	81.6	...	86.9	94.1	...	17.9	12.5
Visual-Motor	3.5	3.4	3.8	5.3	6.0	5.5	1.8	2.6	1.7
Auditory Vocal	44.6	43.4	47.6	52.8	55.5	59.3	8.2	12.1	11.7
Auditory Decoding	46.0	47.9	53.0	52.0	58.5	61.9	6.0	10.6	8.9
Auditory Discrimination	5.5	8.3	14.2	10.9	17.0	18.5	5.4	8.7	4.3
Draw-A-Line	...	1.02	1.20	...	0.68	0.64	...	-0.34	-0.56
Draw-A-Person	49.1	34.0	34.8	52.4	46.8	46.8	3.3	12.8	12.8

The battery of instruments used for the past three years, except for minor changes, has been fairly satisfactory although there have been some serious concerns about several which will probably result in replacements. Performances on the Auditory Discrimination Test have been of particular concern. As was noted previously, many children do not apparently understand the nature of the task and scores fluctuate wildly and unpredictably. It often seems more a matter of failure to comprehend the task than inability to discriminate. The questionable validity and reliability of the task for this age level cast serious doubt on any statistical findings and some replacement for this task is clearly called for.

Performance on the DAP also appears to be rather unreliable, with the drawings showing unexpected changes seemingly produced by a child's unwillingness to cooperate with the examiner for the task with accompanying lower scores. Despite that and other abrupt changes in performance levels, the DAP is felt to be a useful and revealing task and some attempts will be made to find modified ways of continuing to use it if possible.

The crucial issue regarding the present results is whether they do support some of the stated objectives of the program, particularly whether there has been an increase in the use of language and communication skills, sensorimotor skills, and whether, in a general sense, there has been an increase in cognitive achievement beyond that which would be expected if children were not in such a program. The lack of a control group once again imposes an experimental limitation which is recognized, but unavoidable. However, its absence certainly does not completely negate the present results and it is possible to offer some evidence in support of the effectiveness of the program.

Children in the present sample averaged about 54 months of age when they entered the program and between 61 and 62 months at the time the post-evaluation was done. Referral to Table 9 shows the large increases (decrease on the DAL) in performance which occurred during this time period. Table 10 shows the comparison with the past two years and the rather close over-all similarity of results. Each of the tasks reveals performance increases beyond those which might be expected through maturation alone, i.e., a possible increase of a month in performance level for each month of age on some

Figure 1 Three-Year Comparisons of Pre-Kindergarten Changes in 3 Measures of ECE Program Evaluation Between Pre-test and Posttest (7 months): PPVT, DAP, and VMI 1968-69 to 1970-71 (N = 88)

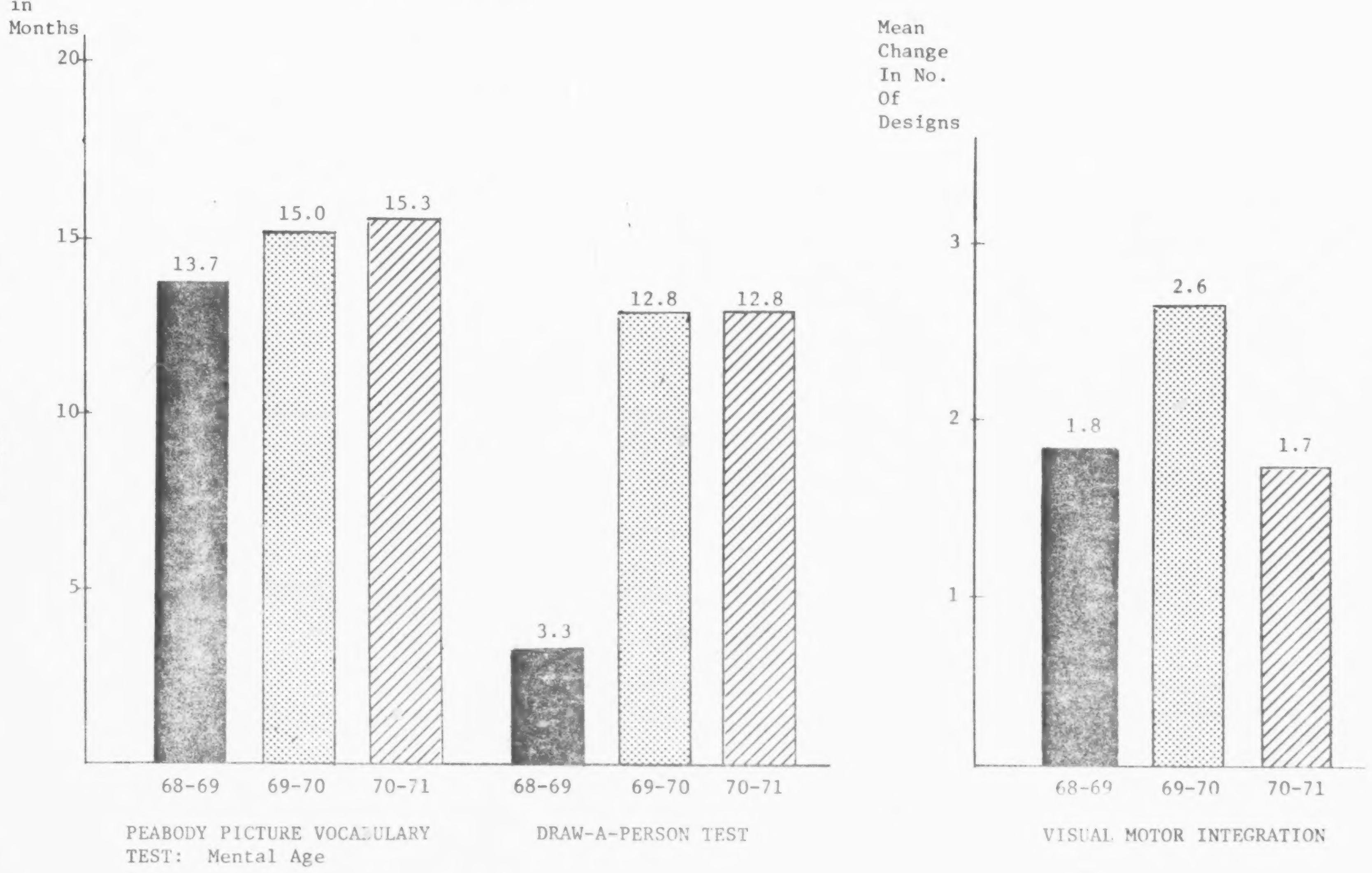
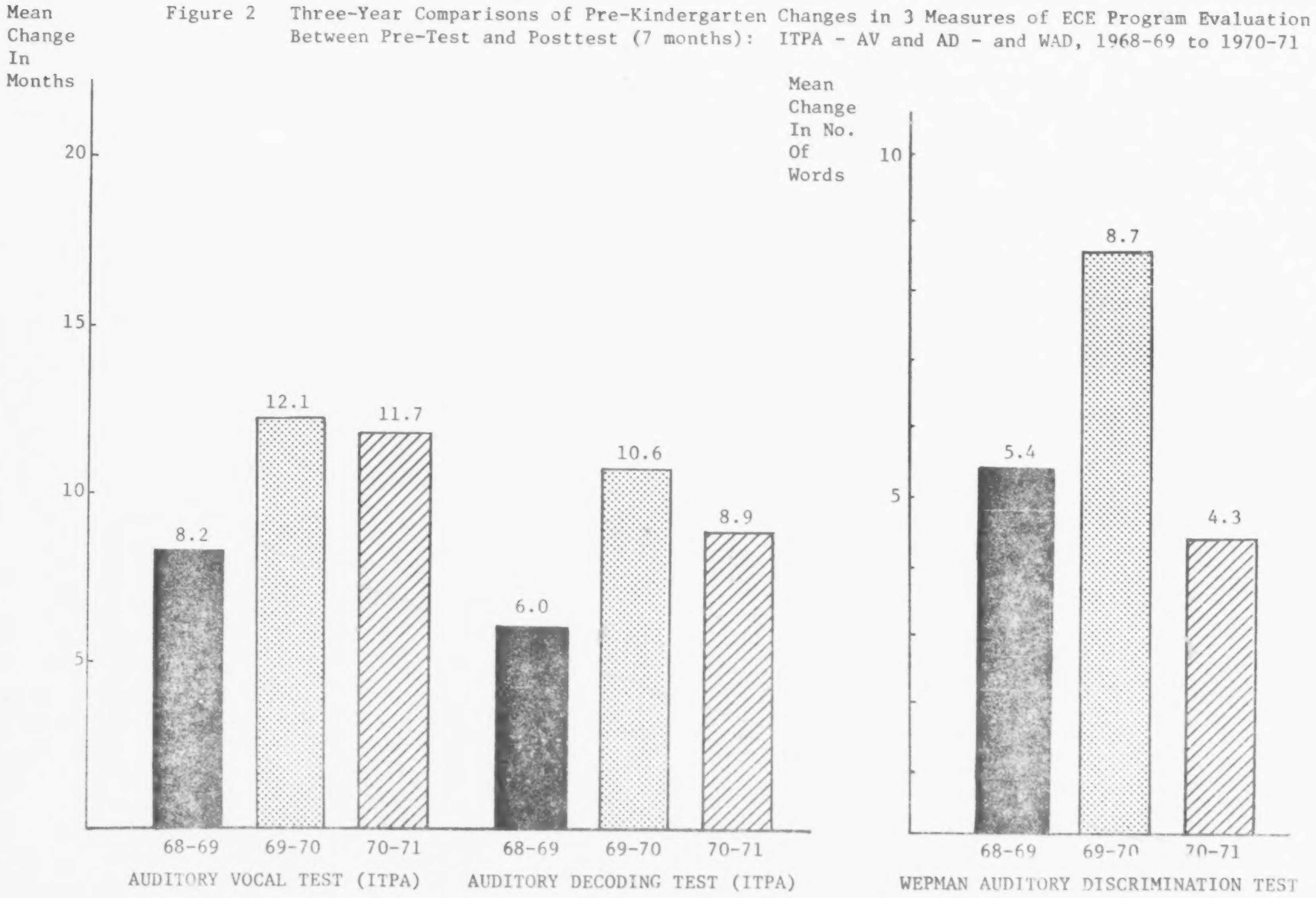


Figure 2 Three-Year Comparisons of Pre-Kindergarten Changes in 3 Measures of ECE Program Evaluation Between Pre-Test and Posttest (7 months): ITPA - AV and AD - and WAD, 1968-69 to 1970-71



of the tasks--if one could make such an assumption for those tasks. Obviously, such increases cannot be easily dismissed as due to chance or to non-program influences. The similarity of the results over the three years is also very striking. Visual presentation of the 3-year comparisons is given in Figures 1 and 2.

Project Early Push, Buffalo, New York (2), cited by the U.S. Department of Health, Education and Welfare, Office of Education, as "One of a Series of Successful Compensatory Education Programs" describes a program for prekindergarten children in Buffalo during 1967-68, corresponding in age and other details to the Dayton ECE program. Pre- and post-testing on the PPVT revealed an increase of 10 IQ points in the 7 months between testing. In 1970-71 and in 1969-70, increases of 12.5 and 17.9 IQ points, respectively, were found for the ECE program. (See Table 10.)

As noted in previous reports, the study by Dunn, Horton and Smith in their manual for the Peabody Language Development Kits--Level #P (3), also provides support. Data collected on four- and five-year olds in day care centers in the Nashville area were cited. Control and experimental groups were available with the latter group receiving daily lessons from Level #P of the PLDK. The two groups were compared on the PPVT and other tests following a seven-month educational period. The increases in PPVT performance were 12.0 and 7.8 IQ points for the experimental and control groups, respectively.

An evaluation of the preschool program of Fresno, California, cited in Foundations for Success in Educating Disadvantaged Children (4) also lends support on one criterion instrument to the impact of the program. The PPVT was used in 1966-67 and again in 1967-68. "The results showed significant gains in vocabulary (the scores also can be translated into IQ in the case of this test) from pretest to posttest. No comparison group was available, but as the gains were considerable, the differences between the means being

12 or more points of IQ, there is little room for doubt about the success of the program."

These several studies plus others cited in Current Research in Early Childhood Education (5) which are regarded as successful programs in compensatory education show results which are consistent with the present ECE levels.

TABLE 11

COMPARISON BETWEEN LOW AND HIGH ABSENCE GROUPS ON CRITERION TASKS

Tasks	Low Absence (Ext.)		High Absence (Control)		
	Mean	S.D.	Mean	S.D.	"t"
Peabody M.A.	17.43	9.13	11.86	9.62	1.168
Peabody I.Q.	15.11	10.99	11.14	14.98	0.787
Visual-Motor	1.96	2.03	1.00	1.80	1.447
Auditory Vocal	14.04	9.45	12.79	11.48	0.249
Auditory Decoding	7.68	20.15	11.07	16.76	0.607
Auditory Discrimination	6.43	7.02	1.68	7.56	2.037*
Draw-A-Line	-0.30	0.82	-0.62	1.42	0.956
Draw-A-Person	9.64	21.28	11.89	15.29	0.393

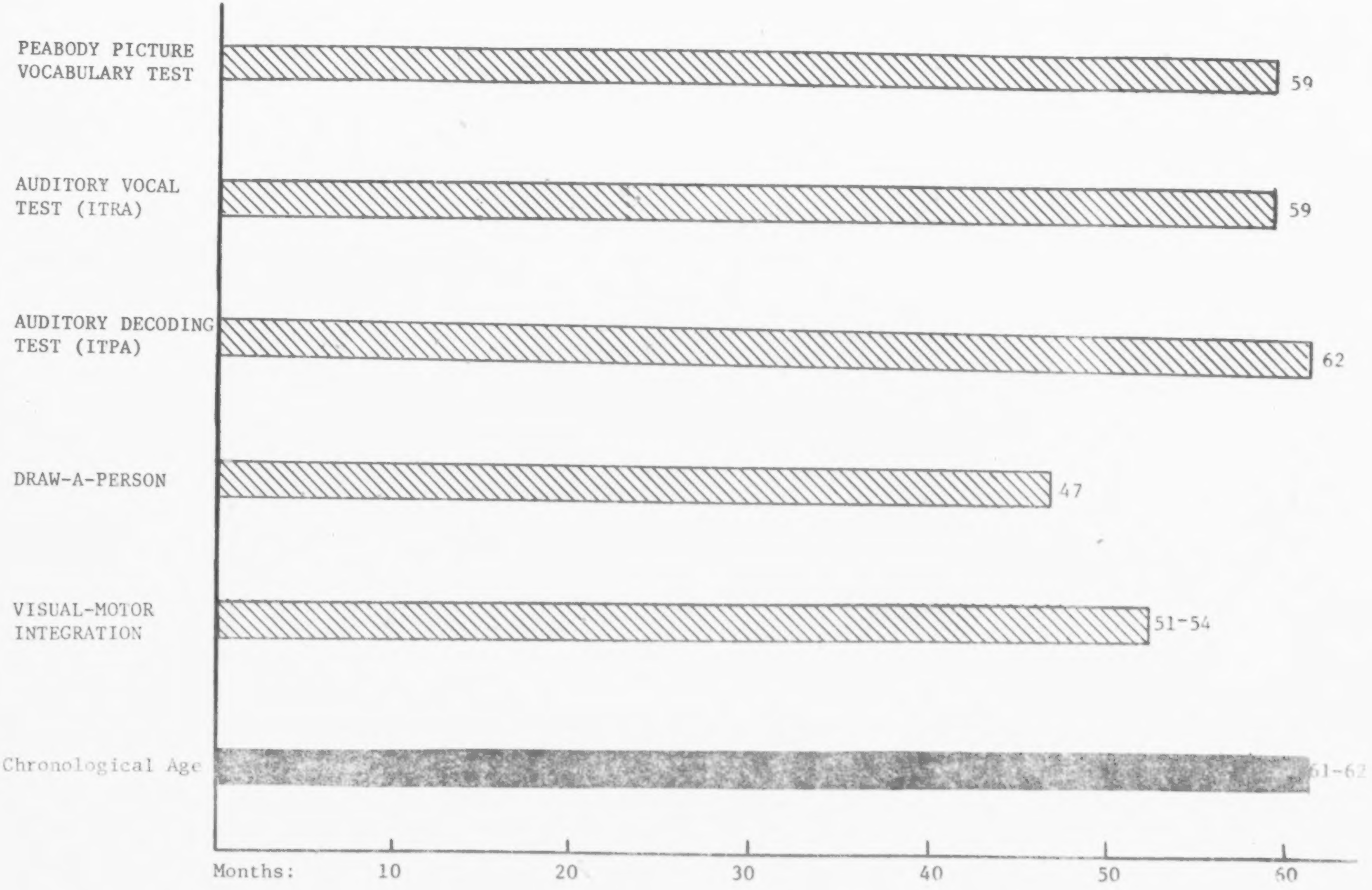
*$p < .05$ ("t") = 2.671, $p < .01$, 54 d.f.
2.005, $p < .05$

Additional related evidence is also provided in Table 11 which compares the group of 28 children irregularly enrolled (30 or more days of absences with an average of 42.3 days missed) with a group of 28 children who attended regularly (an average of only 1.2 days missing). This comparison provides some evidence of relative effectiveness, since both groups were in the program and all were involved in it to varying degrees. As was noted previously these two groups were rather poorly matched since it was not possible to pair them on such important dimensions as length of time in the program and the schools in which they were enrolled. Despite the poor matches, it is interesting to note that the low-absence group attained a larger mean difference score on almost every task except for the DAP and the Auditory Decoding Test. However, only the Auditory Discrimination Test proved to be minimally statistically significant ($t=2.037$, $p<.05$). The extremely large variability on some of the tasks reflects the widely ranging performance levels which may be attributable in some cases to the nature of the task.

Although significant gains were recorded during the seven-month educational period which clearly support the effectiveness of the program in the areas evaluated, the children in the present sample are once again on the average still somewhat "below grade level" on the various tasks. These children whose mean age is now about 61 to 62 months average 59 months (approximately 94 IQ) on the PPVT, 59 months on the AVT, 62 months on the ADT, 47 months on the DAP and about 51 to 54 months on the VMI. (See Figure 3 for a graphic comparison of these means.)

The significance of this material and other facets of the evaluation will be discussed in the summary section. It should be noted at this time, however, that the average level of performance on many of these tasks was the highest attained in either of the previous years. (Refer to "Post-School Mean" column in Table 10.)

Figure 3 Comparison of Mean Age Equivalents of ECE Posttest Evaluations with Mean Chronological Age of Children, May 1971



II. KINDERGARTEN EVALUATION

The same assessment plan which was initiated two years ago was continued again this year. A comparative evaluation of children now in kindergarten with and without ECE experience was again carried out. It is crucial to assess the long-term effects of such a program as ECE to learn whether it does carry-over into kindergarten and subsequent years, or whether its effects are short lived, diminishing with time and other external conditions. Children from seventeen different schools who had been in the 1969-70 ECE program were used in the evaluation. Schools providing kindergarten children for the initial evaluation in kindergarten were Washington, Huffman, McGuffey, Gardendale, Ruskin, Emerson, Drexel, Edison, Highview, Louise Troy, Irving, MacFarlane, Grace Greene, Jackson, Westwood, McNary and Whittier. For the post-kindergarten evaluation the same children from fifteen of the same schools were used. Edison and Irving did not enter into the post-evaluation. Control or non-ECE enrollees were obtained from the same schools and were matched on sex, race and for general social background.

The factors of major interest which were entered into the experimental design were sex, race, and whether or not the child had previously been enrolled in the ECE program. Since the longitudinal plan involves charting the progress of children over a long time period, all available children from the previous year's ECE sample were examined. Experience has clearly indicated that attrition rates are quite heavy among this population of children and that every available child must be used to offset these losses which result in only a small number of the original pre-kindergarten samples being enrolled by the first or second grade.

None of the children in the no-school group had been in any pre-school program so far as could be verified by record, or by teacher's or parent's reports. The results obtained last year suggested very strongly that more care needed to be taken in selecting and matching children, since it appeared on post-facto examination that children had gotten into the sample who were somewhat questionable on the selection criteria. Children were evaluated as soon as possible following their entrance into kindergarten and as late as possible during their final month in kindergarten. The initial evaluation would provide a comparison for the effects of ECE training, as well as the possible differential effects of race and sex and the combinations of these factors. Similar conclusions could be drawn from post-testing where the effects of kindergarten experience could also be examined.

Description of Tests and Scoring

The same considerations entered into the selection of tests for the kindergarten level as in previous years:

1. Group as opposed to individual administration because of personnel limitations.
2. Length of testing time available, because of classroom restrictions and ability to maintain children's attention and interests.
3. Utilization of the same tests from previous years to facilitate comparisons.

Personnel limitations made it impractical to administer more than a single test for each of the two evaluations and each of the tests had to be of a type which could be managed by persons with less than professional psychological testing training. The tests were administered by the ECE teacher consultants and social workers, most of whom by the time of the present evaluation had already administered each of the two tests selected on two previous occasions and were thus very well acquainted with the tests and the problems of managing a group administration with five-year-olds. Children were tested in small groups, usually of 5 to 6, within a two-week period in early October, 1970, and within a similar time period at the end of May and early June, 1971. Approximately 7 months intervened between the two test administrations.

The Kuhlmann-Anderson Test, 7th Edition, Booklet K, Revised 1965, was again used for the pre-kindergarten evaluation. It is generally viewed as an "intelligence test" and provides an IQ which is defined as "an index of the degree of a pupil's mental ability, or academic potential, in comparison with a representative sampling of pupils of the same chronological age." (6, p. 26). The test consists of eight parts, each of which provides a score, but IQ's and other standard measurements are provided only for the total score. The test involves picture completion, locating the incorrect part in a picture, classifying objects which belong together, identifying objects which fit various orally described specifications, completing designs, matching figures, counting and following directions.

The Metropolitan Readiness Tests, Form A, 1965, were used for the terminal evaluation. They measure the extent to which school beginners have developed in the several skills and abilities that contribute to readiness for first grade instruction. Six tests are included in the MRT:

1. Word Meaning, a 16-item picture vocabulary test.
2. Listening, a 16-item test of the ability to comprehend phrases and sentences instead of individual words.
3. Matching, a 14-item test of visual perception involving the recognition of similarities.
4. Alphabet, a 16-item test of the ability to recognize lower-case letters of the alphabet.
5. Numbers, a 26-item test of number knowledge.
6. Copying, a 14-item test which measures a combination of visual perception and motor control.

Conversion scores are provided on each of the six subtests and the total, but percentile ranks and stanines are provided only for the total score.

Results

The data for both the initial and post-testing were analyzed using ANOVA in a three factor, two level, fixed factor design. IQ's were used as cell entries for the K-A and unconverted scores for the Metropolitan. In the

Kuhlmann-Anderson analysis, 144 children were used and 72 of that number for the Metropolitan Tests. Losses due to transfers to other school systems were unusually high in certain groups, partially accounting for the smaller number used in the Metropolitan analyses. Also eliminated from the analyses of the Metropolitan were any children who had missed more than 30 days of school which resulted in the loss of another 11 children.

TABLE 12
ANALYSIS OF VARIANCE OF KUHLMANN-ANDERSON TEST SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1.777	1	1.777	...
Sex	1.777	1	1.777	...
School	3,927.111	1	3,927.111	51.73***
Race x Sex	2.250	1	2.250	...
Race x School	367.362	1	367.362	4.84*
Sex x School	230.028	1	230.028	3.03
Race x Sex x School	64.179	1	64.179	...
Within	10,325.265	136	75.921	
TOTAL	14,919.750	143		

*** $p < .001$
* $p < .05$

The ANOVA for the Kuhlmann-Anderson results is presented in Table 12. Reference to it reveals two significant F-ratios, one associated with the main effect of school and the other for the interaction of school x race. The F of 51.73 for the school factor is highly significant (1, 136 d.f., $p < .001$). The means associated with this main treatment effect are 98.3 and 87.9 for the ECE and no-ECE groups, respectively. The mean difference of 10.4 IQ points is interpreted as supporting the effectiveness of the ECE program on the development of intellectual or cognitive skills as measured by the tasks on the Kuhlmann-Anderson. This highly significant difference suggests that children who have received the types of experiences offered in the ECE program enter kindergarten functioning at a higher level of intellectual-cognitive development than children who have not had such experiences.

The present results are consistent with the findings of the Kuhlmann-Anderson in the 1968-69 analyses where a mean difference of 5.9 IQ points between the two groups was found which was statistically significant ($p < .02$). Last year, however, no such difference was found, but a highly significant effect of race was established. It is not possible to reconcile these inconsistent findings with any conclusive arguments or facts, but the most compelling possibility relates to the matching of children for the control group last year where examination of the group's composition suggested inadequate matching on the selection criteria. Perhaps it is of more significance to note that positive results have been recorded two of the three years and that the results this year are the most dramatic of the three.

It might be argued that those children who did not have pre-kindergarten experiences are in some significant ways different from those who were enrolled and that the IQ difference is attributable to those uncontrolled or unrecognized characteristics and not to the effects of the ECE program. While such an argument can never be completely refuted, such an assertion seems highly improbable in view of the findings of two out of three years. Those children with and without ECE experience came from the same schools and investigations of various known background characteristics revealed no consistent differences. As a matter of fact, the manner in which children are selected for the ECE program would suggest that they had relatively fewer social, economic and other resources than those who were not selected. Definite selection enters into admission to the ECE program and rather typically children who are not selected come from relatively better social and economic circumstances than those who qualify for admission to ECE.

Inspection and comparison of the various individual cell means showed consistent differences between the four race-sex combinations on the school factor, as listed in Table 13 and shown graphically in Figure 4.

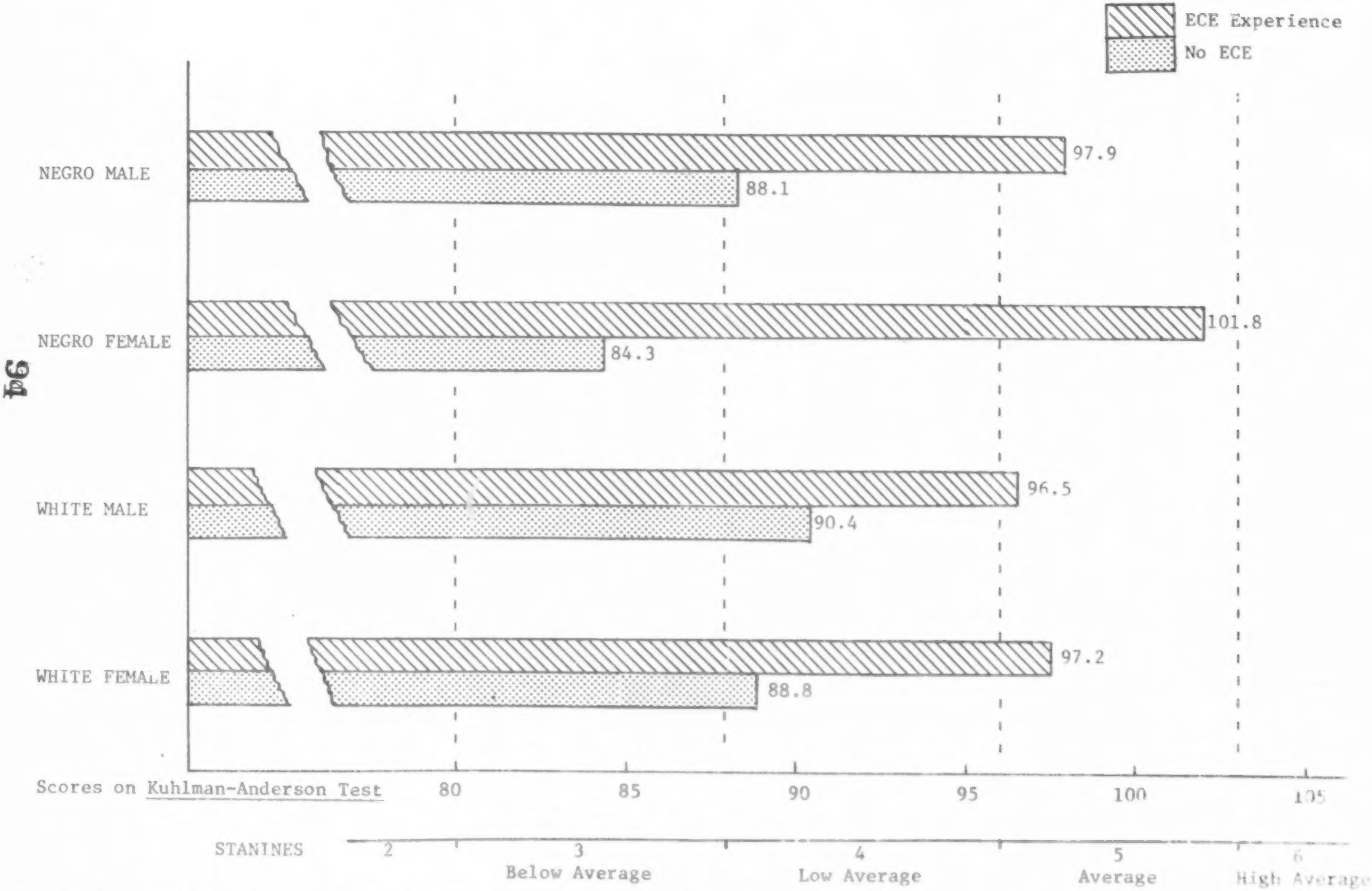
TABLE 13
MEAN IQ SCORES OF KUHLMANN-ANDERSON PRETEST, SEPTEMBER 1970

	ECE			No-ECE		
Group	Mean IQ Score	Percentile	Stanine	Mean IQ Score	Percentile	Stanine
Negro-Male	97.9	45	5	88.1	23	4
Negro-Female	101.8	54	5	84.3	16	3
White Male	96.5	41	5	90.4	28	4
White Female	97.2	43	5	88.8	25	4
TOTAL	98.3	46	5	87.9	23	4

The significant interaction of race x school ($F=4.84$, $p<.05$) indicates that the difference between whites and Negroes is not independent of the levels of schools (ECE or No-ECE), or vice versa. The important fact here is that race enters into consideration only when combined with the school factor.

It is of interest to note that the mean IQ for the total group of 144 children was 93.1 which closely approximates the score of 90.0 last year and 89.1 the year before. This IQ score is equivalent to the 33rd percentile or the fourth stanine. (Refer to Figure 5 for a graphic comparison.)

Figure 4 Comparison of Kuhlman-Anderson Mean Scores of Groups of Kindergarten Children by Race and Sex, With and Without Early Childhood Education Program in Pre-Kindergarten Year - September, 1970



Metropolitan Readiness Tests

The ANOVA's for the Metropolitan Tests are presented in Tables 14-20. Table 14 gives the results of the total Metropolitan score while the other tables contain the results of the six parts which comprise the total score.

Reference to Table 14 reveals one significant F-ratio associated with the effects of school (1, 64 d.f., F=15.21, $p<.001$). The means associated with this factor are 61.6 and 51.4 for the ECE and Non-ECE groups, respectively. The difference of 10.2 points clearly and statistically supports the effectiveness of ECE training through kindergarten. This finding is of great importance, since it is the first time in the three evaluation years that such a result has been obtained, although in previous years small but not statistically significant differences were found favoring the ECE trained children following kindergarten.

A review of the other tables reveals seven more significant F-ratios confined to four of the subtests: Matching, Alphabet, Numbers and Copying. Neither Word Meaning nor Listening showed any significant differences. Four of the seven significant F's were due to the main effect of school, one was associated with race and the remaining two were interaction effects, each involving school. Thus, the factor of school is seen to be permeating performances on most of the subtests, as was revealed on the total score. Table 21 compares the pre-kindergarten (ECE) group with the no pre-kindergarten group on the six Metropolitan subtests. It is apparent from the magnitude of the differences between the means on the Matching, Alphabet, Numbers and Copying subtests that they are the subtests associated with the significant F-ratios for the school factor. The only other main treatment effect (due to race) occurred on the Copying task where the associated means were 7.25 for whites and 5.14 for Negroes.

TABLE 14
ANALYSIS OF VARIANCE OF METROPOLITAN READINESS TEST TOTAL SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	217.014	1	217.014	1.76
Sex	100.346	1	100.346	...
School	1870.678	1	1870.678	15.21***
Race x Sex	1.680	1	1.680	...
Race x School	300.126	1	300.126	2.44
Sex x School	268.348	1	268.348	2.18
Race x Sex x School	16.999	1	16.999	...
Within	7872.597	64	123.009	
TOTAL	10647.792	71		

*** $p < .001$

TABLE 15
ANALYSIS OF VARIANCE OF METROPOLITAN WORD MEANING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	2.000	1	2.000	...
Sex	24.500	1	24.500	2.81
School	9.388	1	9.388	1.08
Race x Sex	0.222	1	0.222	...
Race x School	0.222	1	0.222	...
Sex x School	16.055	1	16.055	1.84
Race x Sex x School	5.555	1	5.555	...
Within	557.329	64	8.708	
TOTAL	615.273	71		

TABLE 16
ANALYSIS OF VARIANCE OF METROPOLITAN LISTENING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	3.555	1	3.555	...
Sex	0.888	1	0.888	...
School	0.888	1	0.888	...
Race x Sex	2.000	1	2.000	...
Race x School	0.000	1	0.000	...
Sex x School	7.999	1	7.999	2.07
Race x Sex x School	10.887	1	10.887	2.82
Within	246.888	64	3.857	
TOTAL	273.109	71		

TABLE 17
ANALYSIS OF VARIANCE OF METROPOLITAN MATCHING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	24.500	1	24.500	3.17
Sex	2.000	1	2.000	...
School	71.999	1	71.999	9.30**
Race x Sex	0.055	1	0.055	...
Race x School	12.500	1	12.500	1.62
Sex x School	32.000	1	32.000	4.13*
Race x Sex x School	1.387	1	1.387	...
Within	495.329	64	7.739	
TOTAL	639.772	71		

** $p < .01$
* $p < .05$

TABLE 18
ANALYSIS OF VARIANCE OF METROPOLITAN ALPHABET SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.500	1	0.500	...
Sex	12.500	1	12.500	...
School	144.500	1	144.500	9.36**
Race x Sex	16.055	1	16.055	1.04
Race x School	4.500	1	4.500	...
Sex x School	9.388	1	9.388	...
Race x Sex x School	2.721	1	2.721	...
Within	988.438	64	15.444	
TOTAL	1178.604	71		

TABLE 19
ANALYSIS OF VARIANCE OF METROPOLITAN NUMBERS SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.125	1	0.125	...
Sex	23.347	1	23.347	1.95
School	177.347	1	177.347	14.80***
Race x Sex	0.347	1	0.347	...
Race x School	125.347	1	125.347	10.46**
Sex x School	17.013	1	17.013	1.40
Race x Sex x School	15.124	1	15.124	1.26
Within	766.662	64	11.979	
TOTAL	1125.313	71		

*** $p < .001$
** $p < .01$

TABLE 20
ANALYSIS OF VARIANCE OF METROPOLITAN COPYING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	80.222	1	80.222	9.15**
Sex	2.000	1	2.000	...
School	53.388	1	53.388	6.09**
Race x Sex	0.055	1	0.055	...
Race x School	5.555	1	5.555	...
Sex x School	26.888	1	26.888	3.07
Race x Sex x School	0.054	1	0.054	...
Within	561.104	64	8.767	
TOTAL	729.270	71		

** $p < .01$

Figure 5 Comparison of Metropolitan Readiness Subtests Mean Scores of Kindergarteners Who Had ECE Experience in Pre-Kindergarten Year With Mean Scores of Kindergarteners Without Pre-K School Experience - May, 1971

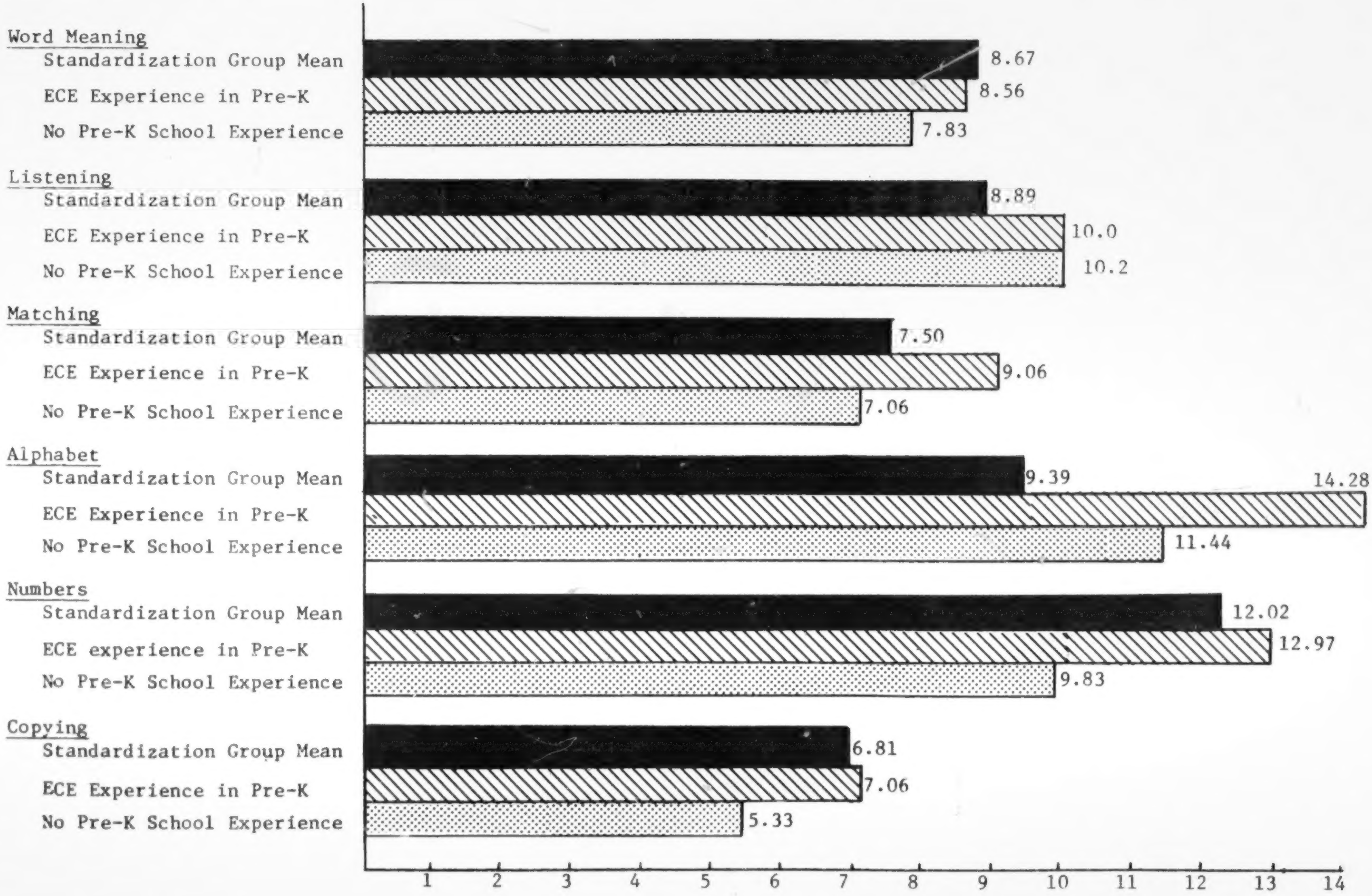


TABLE 21

MEAN PERFORMANCES OF PRE-KINDERGARTEN AND NO PRE-KINDERGARTEN GROUPS ON THE METROPOLITAN READINESS TESTS

Tests	Pre-Kindergarten	No Pre-Kindergarten
Word Meaning	8.56	7.83
Listening	10.0	10.2
Matching	9.06	7.06
Alphabet	14.28	11.44
Numbers	12.97	9.83
Copying	7.06	5.33

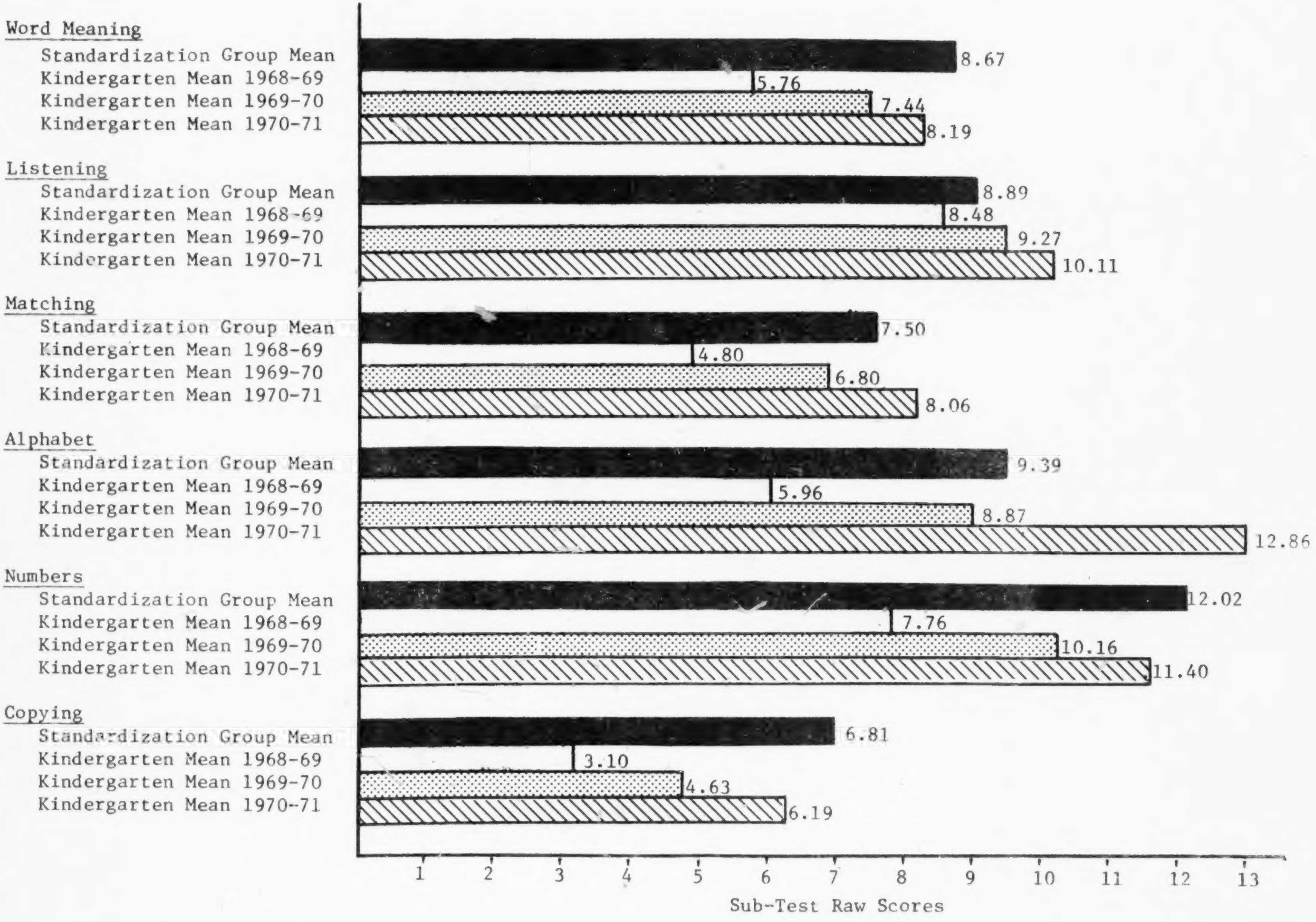
TABLE 22

MEAN SCORES AND MEAN DIFFERENCES BETWEEN 1968-69, 1969-70 AND 1970-71 KINDERGARTEN GROUPS AND STANDARDIZATION GROUPS ON THE METROPOLITAN READINESS TESTS

	Kindergarten Means			Standardization Means	Mean Differences		
Tests	1968-69	1969-70	1970-71		1968-69	1969-70	1970-71
Word Meaning	5.76	7.44	8.19	8.67	-2.91	-1.23	-0.48
Listening	8.48	9.27	10.11	8.89	-0.41	+0.38	+1.22
Matching	4.80	6.80	8.06	7.50	-2.70	-0.70	-0.56
Alphabet	5.96	8.87	12.86	9.39	-3.43	-0.52	+3.47
Numbers	7.76	10.16	11.40	12.02	-4.26	-1.86	-0.62
Copying	3.10	4.63	6.19	6.81	-3.71	-2.18	-0.62

Table 22 presents the mean scores and mean differences between the total kindergarten group for the three years with each group compared with the standardization groups on the Metropolitan Tests. As is readily apparent, all the subtest scores show considerable increases compared with both previous years and very closely approximate the means of the standardization group,

Figure 6 Three-Year Comparison of Mean Scores of Kindergarten Groups With Standardization Group on Sub-Tests of Metropolitan Readiness Test, 1968-69 to 1970-71



in two cases: Listening and Alphabet, exceeding the standardization group. (See Figure 6.) It is of interest to note the steady growth in performances over the three years, a significant phenomenon but one which does not lend itself to easy explanation.

Table 23 presents the mean scores for the ECE group only (N = 36) compared with the standardization group. With the Non-ECE children removed, the differences between the standardization group and the ECE group increase even more, with the ECE group's exceeding the normative scores on five of the six subtests.

TABLE 23
MEAN SCORES AND MEAN DIFFERENCES BETWEEN 1970-71 ECE GROUP ONLY COMPARED WITH STANDARDIZATION GROUPS ON THE METROPOLITAN READINESS TESTS

Tests	ECE Means	Standardization Means	Mean Differences
Word Meaning	8.56	8.67	-0.12
Listening	10.0	8.89	+1.11
Matching	9.06	7.50	+1.56
Alphabet	14.28	9.39	+4.89
Numbers	12.97	12.02	+0.95
Copying	7.06	6.81	+0.25

It is tempting to suggest that such growth is attributable to a more refined and focalized ECE program combined with an altered kindergarten program which is more harmonious with the objectives of ECE and offers more individualized opportunities. Since this is the first year in which the ECE group continued to exceed the Non-ECE group at the conclusion of kindergarten, it is of more than casual interest and concern to account for this finding. While better selection of children in the control group may have played a role, a major, known change in the kindergarten curriculum occurred during the past year which may have considerably more significance.

The Dayton City School District initiated a city-wide, systematic, programmed approach to the development of reading, utilizing several of the well known programs, e.g., Sullivan Language Program, Lippincott, Distar, etc. Children enrolled in kindergarten were also involved in one of the several programs, although not all children were enrolled in the same one. What may be important is not the particular program, but the fact that all kindergarten children did receive planned, systematic instruction in the "language arts" geared to their varying individual levels. It seems most compelling at this point to advance this change in kindergarten curriculum and the resultant individualized approach as the factor most likely accounting for the continued superiority of ECE trained children. Hopefully, next year's results will help to clarify this important point.

Table 24 shows the distribution of "readiness status" scores on the Metropolitan for the 72 children classified according to whether or not they had ECE experience. "Readiness status" corresponding to various ranges of total scores is provided in the Metropolitan manual. According to the table in the manual, those below a score of 24 have a readiness status of "Low" described as "Chances of difficulty high under ordinary instructional conditions. Further readiness work, assignment to slow sections or individualized work, is essential." Those between 24-44 are regarded as "Low normal" and are "Likely to have difficulty in first grade work. Should be assigned to slow section and given more individualized help." Children between 45-63 are regarded as "Average" and are "Likely to succeed in first grade work. Careful study should be made of the specific strengths and weaknesses of pupils in this group and their instruction planned accordingly." Scores from 64-76 place children in the "High normal" range with "Good prospects for success in first grade work provided other indications such as health, emotional factors, etc., are consistent. Finally, scores above 76 classify children as "Superior" and describe them as "Apparently very well equipped for first grade work. Should be given opportunity for enriched work in line with abilities indicated."

TABLE 24
READINESS STATUS OF KINDERGARTEN CHILDREN WITH AND WITHOUT EARLY CHILDHOOD EDUCATION (ECE) EXPERIENCE ON METROPOLITAN READINESS TESTS, MAY 1971

Score Range	Interpretation of the Score Range	With ECE Experience		Without ECE Experience	
		Number	Per Cent	Number	Per Cent
+76	"Apparently very well equipped for first grade work"	2	5.5%	0	0
64-76	"Good prospects for success in first grade work . . ."	15	41.7%	8	22.2%
45-63	"Likely to succeed in first grade work . . . "	17	47.2%	18	50.0%
24-44	"Likely to have difficulty with first grade work . . . . "	2	5.5%	10	27.7%
Below 24	"Chances of difficulty high under ordinary instructional conditions . . "	0	0	0	0

An analysis of the total scores combined in these gross categories indicated that eight more children who had been in the ECE program as compared with those who had not attained scores which categorize them as likely to succeed in first grade work. The situation is reversed in the "Low normal" category where eight more children were placed who had not been in the ECE program. It is also obvious that nearly 95% of the ECE children place in the three categories rated as "Likely to succeed" which clearly represents their superiority on this particular test. That 47% of ECE children place in the top two categories, in contrast to 22% of those without ECE training, is a further indication of the sustained value of the ECE program at the end of the kindergarten year.

The possible statistical significance of this gross distribution of scores was evaluated by the Chi-Square test. A Chi-Square of 9.488 was obtained which reaches minimum acceptable statistical significance ($X^2=9.488$, $p<.05$, 4 d.f.). One, therefore, can reject the hypothesis of no difference between groups and can conclude that the distribution of scores is not a chance phenomenon, indicating that in this case, the ECE group makes a higher distribution of scores than the No-ECE group.

III. FIRST GRADE EVALUATION

As was indicated earlier in describing the plan initiated in 1968-69, it was then decided to follow children's progress in school as long as it seemed worthwhile to do so. The first grade was initially included last year and it was decided to follow those same children into the second grade and to assess last year's kindergarten group in the first grade.

The introduction of the city-wide reading program and the two tests administered to evaluate the effectiveness of that program provided a fortuitous opportunity to use these same results in following ECE children into both the first and second grades. Although 128 children were available for the post-kindergarten Metropolitan testing in the spring of 1970, many of this number had moved by the end of the first grade. Added to the usual attrition problem due to transfers was the fact that not all children took all the same tests and were not all enrolled in the same reading program so that the results were not comparable.

Description of Tests and Scoring

Two different tests and one measurement based upon the Sullivan Language Program were used to provide follow-up assessments. The factors of major interest examined again were sex, race, and whether or not the child had previously been enrolled in the ECE program. All three measurements were analyzed using ANOVA as described previously for both the ECE and kindergarten analyses.

Sullivan Language Program

The Sullivan Language Program (7) provides two types of scores which appeared potentially useful for the present analyses. The child receives several tests while working on each section or book and also receives a final book test, on each of which he is given a score. As he successfully passes a given book with satisfactory scores, he moves to the next book The number of books he completes is completely individualized and the child is able to work at his own pace, completing as many books as he is able during the school year. It was decided to use only the number of books successfully completed for analysis. A specific date in late May, 1971, was used as the cut-off date. Withdrawals, inability to locate children, absences and the fact that not all children in the kindergarten sample participated in the same reading program (the Lippincott and Distar programs, among one or two others were also used in some schools), reduced the final number available for analysis to about 70. However, these were not equally divided for the three factors which were being considered, resulting in 56 children available for the ANOVA.

TABLE 25

ANALYSIS OF VARIANCE FOR SULLIVAN LANGUAGE PROGRAM

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1.785	1	1.785	...
Sex	31.500	1	31.500	5.74*
School	1.142	1	1.142	...
Race x Sex	2.571	1	2.571	...
Race x School	1.785	1	1.785	...
Sex x School	8.642	1	8.642	1.57
Race x Sex x School	-0.000	1	-0.000	...
Within	263.427	48	5.488	
TOTAL	310.856	55		

* $p < .05$

Table 25 presents the results of the ANOVA, using the number of books completed in the Sullivan series as cell entries. Not surprisingly, the only significant F-ratio is that associated with sex (1, 48 d.f., F=5.74, $p<.05$) with girls on the average finishing 1.5 books more than boys ($\bar{X}$ girls = 5.6 and $\bar{X}$ boys = 4.1). It should be noted that significant differences between girls and boys were found last year on the Metropolitan on the total score and also involving two interactions. Although the skills called for in these two instruments are not identical, they have much in common. However, even without consideration of last year's results, one is usually confident in predicting better reading performance for girls than boys and the present findings simply lend support to that oft-found phenomenon. In terms of the main intent of this evaluation, it is important to note the failure to find any significant differences between the ECE and No-ECE groups, a finding which is quite consistent with the post-kindergarten assessment of 1968-69.

Short Form Test of Academic Aptitude (SFTAA)--Level 1

The SFTAA—Level 1, is one of a series of "mental ability tests" for use throughout the school years from grades 1.5 through 12. It is derived from the California Test of Mental Maturity and contains four separately-timed subtests: Vocabulary, Analogies, Sequences and Memory. Vocabulary and Memory constitute the Language section; Analogies and Sequences make up the Non-Language section. A variety of norms are available including IQ, mental age, percentiles, standard scores, stanines and reference scale scores. This particular test was administered in early April, 1971, to all first graders on commission of the Department of Instruction. For their purposes raw scores were translated into IQ scores and only IQ scores were available for these analyses. There were 64 children available for these analyses, including the same 56 used in the reading analysis. One more child was added to each of the eight categories who usually came from a school where a different program other than the Sullivan was being used.

The ANOVA's for the three parts of the SFTAA are presented in Tables 26-28. Table 26 gives the results of the total score while the other two tables contain the results of the Language and Non-Language sections. Once again it is important to note that no significant F-ratios associated with the school factor appear in these analyses. As a matter of fact, for each pair of means associated with the school factor on each of the three analyses, children who had not been in the ECE program scored slightly higher than those who had. However, the differences are not significant and no reliable meaning can be attached to these unexpected findings.

The F-ratios which do attain significance are quite consistent with the results of the kindergarten Metropolitan for this group where race and sex were found to have major effects. The F of 8.12 for the race factor on the total score is very significant (1, 56 d.f., $p < .01$) while the F of 4.80 for the race factor on the Non-Language section attains minimal statistical significance ($p < .05$). The means associated with the main treatment effect of race on the total score are 99.6 and 90.8 for whites and Negroes, respectively, and 99.3 and 92.3 for the same groups on the Non-Language section.

TABLE 26
ANALYSIS OF VARIANCE OF SFTAA TOTAL SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1233.765	1	1233.765	8.12**
Sex	4.515	1	4.515	...
School	425.390	1	425.390	2.80
Race x Sex	50.765	1	50.765	...
Race x School	40.640	1	40.640	...
Sex x School	66.015	1	66.015	...
Race x Sex x School	17.003	1	17.003	...
Within	8511.375	56	151.988	
TOTAL	10349.472	63		

** $p < .01$

TABLE 27
ANALYSIS OF VARIANCE OF SFTAA LANGUAGE SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	546.390	1	546.390	2.77
Sex	141.015	1	141.015	...
School	260.015	1	260.015	1.32
Race x Sex	0.765	1	0.765	...
Race x School	570.015	1	570.015	2.89
Sex x School	260.015	1	260.015	1.32
Race x Sex x School	87.878	1	87.878	...
Within	11033.375	56	197.024	
TOTAL	12899.472	63		

TABLE 28
ANALYSIS OF VARIANCE OF SFTAA NON-LANGUAGE SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	784.000	1	784.000	4.80*
Sex	182.250	1	182.250	1.12
School	150.062	1	150.062	...
Race x Sex	45.562	1	45.562	...
Race x School	4.000	1	4.000	...
Sex x School	81.000	1	81.000	...
Race x Sex x School	95.035	1	95.035	...
Within	9139.000	56	163.196	
TOTAL	10480.910	63		

* $p < .05$

These over-all results suggest a consistent performance over two years for the samples considered, but indicate, that under the conditions then prevailing, ECE exposure did not continue to have any effect on this group on this particular measuring instrument.

The total group mean IQ of 95.2 for the Total Score was equivalent to only the 39th percentile while the ECE group placed at the 32nd percentile and the Non-ECE group at the 48th percentile.

Stanford Achievement Test - Primary I

The Stanford Achievement Test is the "designation of a series of comprehensive achievement tests developed to measure the important knowledge, skills, and understandings commonly accepted as desirable outcomes of the major branches of the elementary curriculum."(8) The Primary I Battery is designed for use from the middle of Grade 1 to the middle of Grade 2. It includes six tests: Word Reading, Paragraph Meaning, Vocabulary, Spelling, Word Study Skills, and Arithmetic. This particular test was administered in late May, 1971, to all first graders by direction of the Department of Instruction. For their purposes only the Word Meaning, Paragraph Meaning, Vocabulary, and Arithmetic sections were used and scores were expressed as grade equivalent scores. Sixty-four children of the original group were available for these analyses. These were the same 64 used in the SFTAA analyses.

The ANOVA's for the four parts of the Stanford are presented in Tables 29-32. As is readily apparent, the school factor is once more found to be insignificant in performances on these tests, consistent with the findings on the reading and on the SFTAA. F-ratios attaining statistical significance were found on vocabulary for race ($F=7.47$, $p < .01$) and on paragraph meaning for sex ($F=4.84$, $p < .05$) and for the triple interaction ($F=4.84$, $p < .05$).

TABLE 29
ANALYSIS OF VARIANCE OF STANFORD ACHIEVEMENT TEST ARITHMETIC SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1.470	1	1.470	3.23
Sex	0.097	1	0.097	...
School	0.045	1	0.045	...
Race x Sex	0.097	1	0.097	...
Race x School	0.150	1	0.150	...
Sex x School	0.012	1	0.012	...
Race x Sex x School	0.288	1	0.288	...
Within	25.506	56	0.455	
TOTAL	27.668	63		

TABLE 30
ANALYSIS OF VARIANCE OF STANFORD ACHIEVEMENT TEST VOCABULARY SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	1.822	1	1.822	7.47**
Sex	0.122	1	0.122	...
School	0.422	1	0.422	1.73
Race x Sex	0.000	1	0.000	...
Race x School	0.010	1	0.010	...
Sex x School	0.810	1	0.810	3.32
Race x Sex x School	0.359	1	0.359	1.47
Within	13.669	56	0.244	
TOTAL	17.217	63		

** $p < .01$

TABLE 31
ANALYSIS OF VARIANCE OF STANFORD ACHIEVEMENT TEST PARAGRAPH MEANING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.045	1	0.045	...
Sex	0.438	1	0.438	4.84*
School	0.045	1	0.045	...
Race x Sex	0.131	1	0.131	1.45
Race x School	0.003	1	0.003	...
Sex x School	0.003	1	0.003	...
Race x Sex x School	0.438	1	0.438	4.84*
Within	5.078	56	0.090	
TOTAL	6.186	63		

* $p < .05$

TABLE 32
ANALYSIS OF VARIANCE OF STANFORD ACHIEVEMENT TEST WORD READING SCORES

Source of Variation	Sum of Squares SS	Degrees of Freedom df	Mean Square	F Ratio F
Race	0.302	1	0.302	2.39
Sex	0.122	1	0.122	...
School	0.122	1	0.122	...
Race x Sex	0.050	1	0.050	...
Race x School	0.030	1	0.030	...
Sex x School	0.030	1	0.030	...
Race x Sex x School	0.422	1	0.422	3.34
Within	7.082	56	0.126	
TOTAL	8.164	63		

IV. SECOND GRADE EVALUATION

Sixty-four children were used last year in the first grade analyses of scores on the Clymer-Barrett Prereading Battery, a test which proved to be unsatisfactory as an end-of-first-year test. As noted earlier, the introduction of a new city-wide program of reading/language instruction, with the subsequent administration of one or more tests throughout the system, provided unanticipated opportunities for the continued longitudinal assessment of the ECE program. It was possible to obtain scores on two indices which were felt to be directly relevant to the academic progress of former ECE enrollees. The major problem encountered was locating enough children from the previous year to make such an evaluation possible. One of the really formidable problems in conducting long-term research with low income families and children is their extreme mobility and transiency. An initial sample of 250 in pre-kindergarten is typically reduced by one-fourth at the conclusion of a seven-month program and is reduced with frightening rapidity over the next year or two. When the attrition rate is combined with high absence rates, failure to be present when tests are administered, etc., the available sample for any types of analyses is markedly reduced.

Reading scores on the Sullivan Language Program and selected parts of the Stanford Achievement Test, Primary II Battery, were available. However, the extreme dispersion of children which had occurred within a year, combined with the variety of reading programs which was used in schools throughout the city, rendering the results incomparable, plus other factors, left only a very small sample available.

Sullivan Language Program

The number of books a child had completed was used as the criterion. A specific date in late May, 1971, was chosen as the cut-off date for collecting the data. Only 12 children who had been in the ECE program and 11 who had been used previously as controls from among last year's first grade sample could be located who had participated in the Sullivan program. It was obviously not possible to continue to use ANOVA with such a small number who were very unevenly divided along the several factors of interest: sex, race, and school. In an attempt to provide a limited and admittedly gross examination of the school-no school factor, sex and race were pooled and only the school factor was used to evaluate the meager data through use of the "t" test. The "t" was only 0.397 where 2.080 is required for minimal significance with 21 d.f., means being 8.00 and 9.64 for the pre-kindergarten and no pre-kindergarten groups respectively. However, no practical or other significance can be attached to this finding.

Stanford Achievement Test - Primary II

This test was administered in late May, 1971, to all second graders under the same direction as the first grade tests. Although eight tests are in the Primary II Battery, only three were systematically administered to second graders in this mass testing: Word Reading, Paragraph Meaning, and Word Study Skills. Scores were expressed as grade equivalent scores.

It was not possible to continue the more refined and complex analyses by ANOVA because of the unequal numbers by sex and by race, so that only the school factor was evaluated by "t" tests on the three parts of the Stanford which were available.

The "t" tests for these three parts; Word Meaning, Paragraph Meaning, and Word Study Skills, comparing 22 pre-kindergarten with 14 no pre-kindergarten children (pooling sex and race) were all significant. The "t" for Word Meaning was 0.148; for Paragraph Meaning, 0.259; and for Word Study Skills, 0.352; where t=2.032 is required for minimal statistical significance ($p < .05$) with 34 d.f.

EVALUATION SUMMARY

The completion of each additional year's evaluation of a program whose results are being assessed, not only cross-sectionally, but longitudinally, adds to the burden of trying to summarize the results into concise, meaningful generalizations which do not do violence to the detailed explanations and irregularities. Research in the behavioral sciences is characterized by contradictory findings, inconsistencies, and ad hoc explanations and hypotheses. So many unrecognized or uncontrolled variables operate from study to study that it is often very difficult and, even, foolhardy to attempt to compare them. In spite of the immense variety of variables operative, studies in the area of early childhood education have begun to show with considerable regularity similar general findings which suggest that there are now some valid principles in existence. The results of at least three years' experience with the ECE program have also begun to point to some consistencies within that program and to the subsequent careers of children when they have entered into the regular school sequence. These findings over the several years of longitudinal research are remarkably consistent with those of many other programs throughout the country.

As previously indicated, the current evaluation is a continuation of the program assessment model initiated in the 1968-69 school year which was designed, not only to evaluate the effects of the ECE program on children then enrolled, but planned to evaluate whether the program had any measureable, lasting effects as these children progressed through kindergarten and the primary grades. In view of the increasing evidence concerning the short-term effects of pre-kindergarten experiences following entry into "regular" classrooms, it is of great interest and importance to assess not only the immediate impact of the pre-school program upon children, but to assess whether it has any lasting effects and, if not, why it does not. While it is recognized that other facets of children's development are of equal importance, cognitive skill development, particularly the all-important language and communication skills, was singled out for study because it is more amenable to objective measurement and is still regarded as the major criterion of success in educational systems. It is planned to measure other objectives of the ECE program in addition to intellectual-cognitive skills during the next cycle in 1971-72.

The evaluation plan, limited in scope primarily by funds and staff, has so far been able to follow one group of children into the second grade and to assess three kindergarten groups; two first grade groups and four ECE groups, although the first ECE group was not administered the same instruments and cannot be used for comparison. To summarize, the following outline shows the school years and groups evaluated during those time periods:

	1st Cycle	2nd Cycle	3rd Cycle	4th Cycle
1967-68	ECE			
1968-69	Kindergarten	ECE		
1969-70	1st Grade	Kindergarten	ECE	
1970-71	2nd Grade	1st Grade	Kindergarten	ECE

This year a sample of children in the ECE program was chosen using 22 of the 26 centers. Children were measured on a variety of cognitive tasks involving language, visual-motor integration skills, auditory discrimination, body awareness and motor inhibition, essentially the same tasks used the previous two years. As in previous years, children were found to show considerable growth on each of the tasks, with the largest and most consistent gains occurring in language-related areas. On all but two of the tasks, this year's sample began at slightly higher levels of performance than either of the previous years, and, on all but two of the measures, they also attained higher post-school mean scores. This group also attained, or nearly attained, "grade level" performance on several of the tasks, especially those which are language-related, the first of the three groups to do so.

The results indicate that, in general, none of the main experimental factors operates in any predictably consistent way, alone or in combination, to produce significant changes on most of the seven criterion tasks. These results have been consistent over the three years. Perhaps one of the most significant findings, though, is that the amount of time children have spent in the program (one or two years) is an unimportant variable, as measured by these particular tasks. The main factor of schooling alone did not have any effect on performance level and at no point was there demonstrated any superiority of two years over one year in the program either at the beginning of the ECE program or at its conclusion. Separate analyses done at the beginning of the program and at the conclusion showed identical results, i.e., re-enrollees did not perform at significantly better levels on any of the tasks than did those who were enrolled for the first time. However, on pre-program measurements, three of the tasks did reveal statistically significant performances attributable to sex, with girls attaining higher performance levels than boys.

It is also of importance to note once again that there were no racial or ethnic differences revealed on the tasks, suggesting that at this age, at least, the "culture of poverty" seems to be the overriding factor which transforms children of different "racial" backgrounds into rather homogeneous organisms, at least so far as cognitive performance is concerned, as measured by these particular tasks.

Several programs regarded as successful by the U.S. Department of Health, Education and Welfare, Office of Education, or the American Institutes for Research which was commissioned by the Office of Education to review successful and unsuccessful programs, were cited, the results of the ECE program comparing very favorably with them. It is also possible to offer a limited test of the program's impact by comparing the performances of high-absence and low-absence groups (although, unfortunately, poorly matched) drawn from the original sample. Despite the poor matches, the low-absence group attained a higher performance level than the high-absence group on every task except two, although only one statistically significant difference was found.

A comparative evaluation of kindergarten children with and without ECE experience was once again performed at the beginning and at the conclusion of kindergarten. Highly significant differences in mean performance levels were found both on admission to and at the conclusion of kindergarten, in both cases the ECE group scoring higher on standardized tests than the No-ECE group. The present results on admission to kindergarten are consistent with the findings in the 1968-69 analysis and, thus, it marks the second time in three years that such results have been found. While the results last year cannot be ignored, a post-facto review of the kindergarten sampling at that time suggested that there was probably inadequate matching in the control group and perhaps that experimental defect may have accounted for the non-significance of the school factor.

The most significant finding, however, is the continued superiority of the ECE group at the end of kindergarten, the first time in the three evaluation years that such a result has been obtained in the psychological evaluation, although in previous years small but not statistically significant differences were found favoring the ECE group. The increasingly higher performance levels of the ECE groups in 1969-70 and this year suggest that such growth may be attributable to an increasingly more refined, responsive and focalized program which carries over into kindergarten. A major, general curriculum change also occurred during the past year which is hypothesized as the major factor accounting for the continued superiority of ECE children through kindergarten. The Dayton City School District initiated a city-wide, systematic, programmed approach to the development of reading utilizing several of the well known programs, primarily the Sullivan Language Program, Lippincott, and Distar. Children in kindergarten were also involved in one of the several programs and it is believed to be this individualized, systematic approach, similar in design and philosophy to the ECE techniques, that accounts for the continued superiority of ECE children. It is hoped that next year's results in kindergarten and the first grade will help to clarify this very important point.

An analysis of the distribution of readiness status scores on the Metropolitan Readiness Tests, according to whether or not the children had ECE experience, revealed that more children with ECE experience were classified as likely to succeed in first grade work and fewer were classified as unlikely to succeed, when compared with those who had no ECE experience. The distribution of scores achieved statistical significance.

The average scores for the total group on the Metropolitan this year more closely approximated the standardization group then ever before and, on two of the subtests exceeded the norms. It is of some interest that there has been a steady but, as yet, unexplained growth in performance levels on the Metropolitan Tests over the three years.

First graders were considered for the second time in the long-term evaluation, although the same test was not used since the one used last year proved to be unsatisfactory. A second grade assessment was also added for the first time. The introduction of the city-wide reading program and two tests administered as part of that program provided an unanticipated opportunity to use the results to measure the progress of ECE trained children as compared with their controls, previously selected. It is perhaps appropriate at this time to comment on the steady attrition of low-income children which accompanies any type of even relatively short-term evaluations of their progress in school. One of the very formidable problems encountered in this group is their extreme mobility and transiency. Initial samples of more than 250 in the pre-kindergarten phase are quickly reduced by one-fifth or one-fourth that number within a seven-month period because of withdrawals. This number is steadily eroded during the next several years so that by the end of the second grade only a fraction of that number is available. Losses are not entirely due to withdrawals or transfers, although they are the major reasons for losses. High absence rates and failure to be present when tests are administered are among other major causes of attrition. A leading investigator in the field of early childhood education commented in a speech a few years ago on the same phenomenon and also wondered how many "experimental" children became some other investigator's "control" children at another time and place without realizing it.

It is particularly worth noting that of the more than 300 three-year-olds enrolled in the ECE program in the 1969-70 school year, only 93 were located and available for the pre-program evaluation in the Fall of 1970. For some inexplicable reasons which certainly merit concern and investigation, the highest rates of absence occurred among the re-enrollees. Seventeen of the original 93 missed more than 30 days of the program and the white boys' group averaged 25 days' absence for the total group. Why there should be such a high absence rate among the re-enrollees is not known, but it is a phenomenon which will be watched carefully next year. The failure of almost two-thirds of the original group of three-year-olds to re-enroll in the program also bears careful attention, particularly if such losses are not due to moves out of the school district.

Results of the first-grade evaluation, using a score from the language program and results from two standardized tests, were uniformly negative in offering any evidence of better preformances for the ECE group (initially evaluated in 1968-69) as compared with a comparable group of Non-ECE children. The reading criterion (number of books completed on the Sullivan series) showed only that girls performed significantly better than boys.

The SFTAA results were consistent with the kindergarten findings the previous year where race and sex were found to be influential factors, suggesting consistency over the two years. The Stanford Achievement Test revealed similar results for the same factors.

Only limited analyses could be performed for second graders, since the many factors already discussed had reduced the original group to a token number. Neither of the two criteria used, number of books completed on the Sullivan series nor the Stanford Achievement Test, supported the superiority of ECE trained children which is consistent with the failure to find continued higher performances last year in the first grade.

The results for the children currently enrolled in the ECE program would appear to leave little or no doubt that it has had a significant, positive impact on the development of general cognitive skills. The magnitude of change on most of the criterion instruments could in no way logically be attributed to chance or to maturation, and evidence, both direct and indirect, has been presented to support this assertion. The similarity of results for the previous two years also lends additional support. Particularly compelling are the findings from two of the three years' initial kindergarten evaluation which indicated a clear-cut statistical superiority of ECE trained children over Non-ECE children on a standardized test of mental ability or academic potential.

The most significant finding from the present series of evaluations from pre-kindergarten through the second grade is the continued dominance of the ECE group at the completion of kindergarten. This continued acceleration is attributed to the introduction of an individualized, systematic program of reading (language skills) into kindergarten this past year, the only known, major change which took place in the kindergarten curriculum. While only subsequent evaluations will increase or decrease the tenability of such a hypothesis, it seems a logical inference, based upon the research accumulating in the area of early childhood education. At the risk of redundancy with last year's report, no more definitive statement about the place of preschool intervention programs and the need for continual stimulation thereafter can be offered than that of Klaus and Gray (9):

> The most effective intervention programs for preschool children that could possibly be conceived cannot be considered a form of inoculation, whereby, the child forever after is immune to the effects of low-income home and of a school inappropriate to his needs. Certainly, the evidence on human performance is overwhelming in indicating that such performance results from the continual interaction of the organism with its environment. Intervention programs, well conceived and executed, may be expected to make some relatively lasting changes. Such programs, however, cannot be expected to carry the whole burden of providing adequate schooling for children from deprived circumstances; they can provide only a basis for future progress in schools and homes that can build upon that early intervention." (Underlining not in original.)

The New York City Early Childhood Project, headed by Dr. Martin Deutsch, reports the following (10):

> "When the prekindergarten and kindergarten classes were originally established, it was our hypothesis that early intervention would adequately prepare disadvantaged youngsters for success in any regular school program. As our work has progressed, we have come to believe that although early intervention is of primary significance in affecting later school achievement, continuous and appropriately sequenced reinforcement in the grades is vitally important if the child is to maintain these gains throughout his school experience." (Underlining not in original) (p-3)

Lichtenberg and Norton (11) in their recent, comprehensive review of cognitive and mental development in the early years devote one part of their review to programs directed towards infants and young children. Their summary statements echo Klaus and Gray, Deutsch and the many other experts in early childhood intervention programs:

> ". . . Anyone who believes that early intervention is a substitute for continual and prolonged assistance to children makes this error. There is no shortcut to the helping of so-called disadvantaged children in the sense of breeding them differently, of giving them intensive care just before school age or from the age of six months to three years, without also altering the entire education process through which they will pass. This may be difficult to accept by policymakers who seek discrete, circumscribed, relatively inexpensive programs, but it is a solidly grounded evaluation by the great majority of students in the field of development." (11, p. 94) (Underlining not in original.)

Later in the same review, they note (11, p. 98):

> ". . . There can be little doubt from these reports, however, that there are effects upon the most disturbed and the most disadvantaged that are positive in nature. These influences are pronounced in the degree to which both intensive and extensive services are provided. Short-term services of moderate impact make the least contribution; long-term intensive services make the most impact. By and large, as we have indicated in the discussion of long-term versus short-term programs, it is necessary to have programs that start early and go right through elementary school if significant and permanent gains are to be established." (Underlining not in original.)

These statements are consistent with the expressed philosophy and beliefs of the ECE programmers and evaluators as indicated in previous reports. Short-term programs, no matter how well conceived or how early introduced, cannot take the place of extensive alterations in educational policies and practices throughout the educational system. Almost all the studies in the literature show declines in performance after short-term programs are ended. Preschool education cannot take the place of improvement of elementary school education.

Early childhood education itself is also subject to a variety of criticisms and unfavorable judgments by persons representing the full spectrum of educational, political and social persuasions. Denzin (12) in a critical article on children and schools notes that schools serve several functions: to Americanize students; to sort, filter and accredit social selves; to instruct and, in the process, to entertain and divert students into "worthwhile" ends; to baby-sit and care-take; and to socialize into age-sex roles. Preschools, he claims, are moral care-taking agencies that undertake the task of shaping social beings and, for the middle classes, care-taking is a moral test. In the same vein, he notes, though:

> "The children of lower income families are often assumed to be deprived, depressed and emotionally handicapped. To offset these effects, current theory holds that the child must be 'educated and treated' before entrance into kindergarten. If middle income groups have the luxury of withholding preschool from their children, low income, third-world parents are quickly learning they have no such right. Whether they like it or not, their children are going to be educated. When formal education begins, the culturally deprived child will be ready to compete with his white peers." (12, p. 66)

Susan Gray (13) in a recent, thoughtful article examines the ethical issues involved in research on the effects of planned intervention early in a child's life. She points out that a decade ago developmental "interveners" were rarely questioned about their motives and general intentions. It was usually assumed that a program which had clear implications for human welfare arose from positive motives. Today, however, questions are being raised, particularly from members of minority groups, concerning such motivation. Objections center on the rights of parents; working only with young children when the basic problem may be the entire social system; and the goals and values of the intervener. She cites as specific ethical principles in response to the issues: (1) In intervention research, one cannot do just one thing, i.e., although one generally takes the child as the point of entry, the intervention is usually aimed at a larger system of which the child is a part. Thus, one must work with due regard to all aspects of that system, including the relationship involved. It is also important ethically that an intervention program is not terminated without making some provision for some type of continuation or sustaining treatment; (2) Avoidance of the invasion of privacy. Associated with that issue is that work with young children and parents from poverty-stricken homes is good newspaper copy; (3) Show respect for the dignity of the individual; (4) Avoid exploiting research subjects; (5) "Informed consent" be obtained from the child's parents and from the child, also, if he is old enough to understand; and (6) The programmer or researcher must be very careful not to raise false hopes.

In a somewhat different vein, Butler (5, p. 62) raises the issue of the focus of most early childhood education programs. She questions whether it is possible that the direct approach to cognitive development is the most effective way to produce competent members of the society and whether we should look for other approaches to early childhood education which will be effective with children who have a variety of needs.

Carolyn Stern (14) raises two similar questions which deserve attention:

> "Does improving the child's ability to discriminate environmental sounds and distinguish differences and similarities in geometric or pictorial visual forms actually lay a solid foundation for learning to read? Does exposing disadvantaged children to a variety of experiences so they can produce coherent stories about them in a limited dialectual form mean that these children can then use language to conceptualize, classify, and form schemata with which to integrate the data in the real world?"

A recent article by Silberberg and Silberberg (15) challenges the current emphasis on reading as an unfounded and illogical ritual or fetish. They ask whether education must continue to emphasize the value of traditional academic education to the exclusion of all else and question whether priorities should not be reordered so that teaching of reading requires less of the educator's time and energies. Their conclusion is that the child's right to learn about the world around him, his own and other cultures, the similarities and differences of other peoples and the social and ecological needs of people outweigh his right to read.

A sampling of only these few articles from the vast literature on education reveals some of the major controversies and disagreements which are rampant in education today. It is apparent that answers to these issues and to the larger question of "Education for what?" will not come easily or quickly. How does one educate for an unknown future in an unstable present when values change so quickly? Since the future is largely unkown, perhaps the major emphasis of any education program should be placed on the development of the qualities and characteristics that make learning possible.

The American education system has always been experimental, varied and controversial. There is no reason to believe that the situation will change or that it would be healthy for its development to seize upon a single method, theory or objective. Early childhood education is no exception to this historical principle despite its relatively brief modern history. As a matter of fact, it seems doubtful that any program involving so many children ever developed so quickly and had such lofty goals set for itself. It would be surprising that any program which has undergone such rapid growth would not in a few years be subjected to critical review when it failed to accomplish immediately the impossible political objective of transforming every disadvantaged child into the educational and "intellectual" equivalent of the middle class child--an unrealistic and invalid goal.

The present ECE program has also described a series of objectives for children for which attempts have been made to measure objectively only a few for the short-term impact, much less for the long-term effects. It is planned during this coming year to try to assess the program more globally without sacrificing the present longitudinal plan of cognitive growth. Of particular interest will be the roles of parents and teachers in the ECE program and efforts will be made to include some of the non-intellective areas such as self-concept and interpersonal relations. Butler's (5) final paragraph in her concluding statement cogently reflects an outlook and philosophy with which few could argue:

> "All responsible educators are concerned that children become proficient in academic skills, but this is just one aspect of becoming a competent human being. We do not know all it takes to make a competent human being, but it is time we looked at outcomes of early childhood education in this context. Perhaps the emphasis on cognitive abilities will help in achieving this goal, but we cannot stop there. We must ask how we can combine the development of intellectual abilities with the realization of human dignity and integrity. That is what the civil rights movement and the antipoverty program are all about. The humanistic idea of education begins with the idea of man as possessing the potential to select and to create a destiny for himself. Education must contribute to the young child's self-fulfillment in the broadest sense. This is a challenge to our best creative thinking both in the planning of programs and in the evaluation of outcomes of early childhood education." (Ibid., pp. 154-55)

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SENSORIMOTOR SKILLS PROGRAM

FY 1971

Division of Research
MANAGEMENT SERVICES DEPARTMENT

DAYTON PUBLIC SCHOOLS
348 West First Street
Dayton, Ohio 45402

Wayne M. Carle, Superintendent

RESUME:

SENSORIMOTOR SKILLS PROGRAM

A Component of EARLY CHILDHOOD EDUCATION PROGRAM
ESEA Title I, FY 1971

Division of Research
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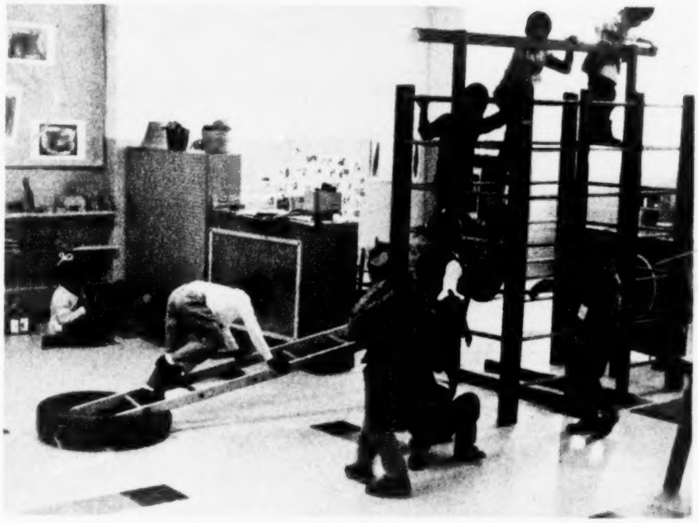
SENSORIMOTOR SKILLS DEVELOPMENT



An integral part of the Dayton Early Childhood Education Program since 1967 has been training in sensorimotor areas of perception and skill performance. For several years, ECE teachers have been given training and assistance in using pre-planned daily classroom experiences and activities in providing a varied sensory environment aimed at developing keener sensory acuity and a high degree of motor skills among the 3- and 4-year-olds of the ECE program, thus, hopefully, preventing perceptual difficulties often associated with failure.

Rationale for this type of sensorimotor training stems from the research of Piaget and others which indicates how important a wealth of sensory and motor experiences are for integrated intellectual functioning of children. The importance of making a strong appeal to spontaneous activity and to sensorimotor manipulations with young children has been especially emphasized by Jean Piaget.[1]

As nationwide attention is being focused on the education of young children, the necessity for sound plans for sensorimotor training has become more crucial.[2] Because of lack of trained physical education instructors to work with most early school classes, there is a special advantage to be gained for sensorimotor training at the pre-kindergarten level, as Glines has indicated:

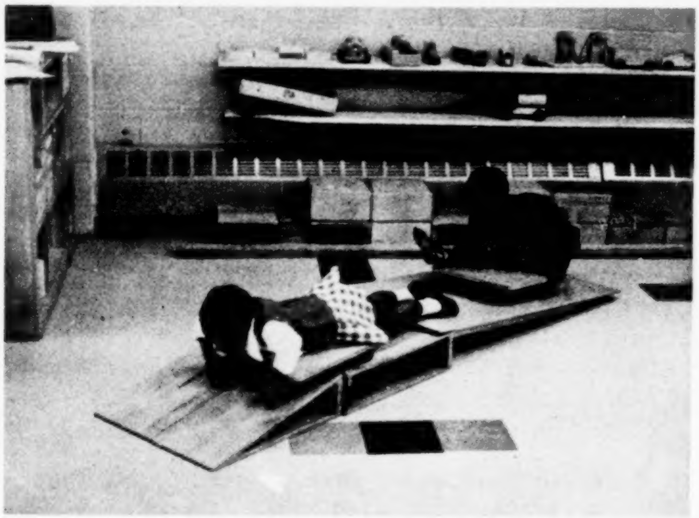
> "Perceptual motor theories . . . spell out the significance of motor activities for ages three through seven . . . In the studies of kindergarten children, the greatest deficiency of many has been in the area of motor encoding, but where is the physical educator in most kindergarten and first year classes in the United States."[3]

As action, or movement, is the natural language of the child's body at this age, his ability to use his body well in play situations becomes vitally important to his emerging self-concept when he compares himself with other children. If he can run, jump, skip, throw a ball, etc., as well as other children, he knows he is adequate. This is the first important step in developing a value of self. Recent research in education indicates that a pre-school child's self-concept is as good a predictor of academic achievement as any IQ score.[4]

Where the Action Is

To aid in selection of appropriate activities, each teacher was supplied with a sensorimotor manual: "Sensorimotor Training for Teachers and Parents of Pre-School Children."[5] The manual covers such areas as:

- Body Image, Space and Direction Awareness
- Balance and Basic Body Movement
- Symmetrical Activities
- Eye-hand and eye-foot coordination
- Large muscle coordination
- Fine muscle control
- Form perception
- Rhythm



Make It Go!

(Large muscle coordination and growth in self-concept)

Working visits to each ECE classroom in the 26 centers were scheduled for one sensorimotor specialist, her two assistants and an aide, on a priority basis. The 7 top priority centers (those with the greatest degree of economic and educational deprivation) had the services of a special sensorimotor staff member approximately 9 times during a 7-month period. The second and third priority centers were visited 7 and 5 times respectively. In addition, the sensorimotor staff worked in the centers in the fall and in late spring administering the Sensorimotor Awareness Survey, a pre- and posttest design. (See Part II, page 6, and the Appendix.)

During the year, the sensorimotor training staff introduced many new activities in each center, such as games making use of tactile skills, and aided the ECE teachers in activities not covered in the manual: parachute play, scooter board skills, rhythms, eye-hand coordination with yarn balls, and eye-foot coordination with hula hoops, as well as many others.

As requested by individual teachers, the sensorimotor specialists gave demonstrations of activities in the manual and generally helped teachers make use of sensorimotor activities in their daily program. At parent meetings at the centers, the sensorimotor staff explained the program to parents.

Each ECE center had been supplied with developmental play equipment and supplies which encourage children in the use of motor skills: jungle gym, walking board, scooter boards, balance boards, ladder, twist boards, mats, assorted sizes and types of balls, beanbags, ring toss game, rope lengths, rhythm band instruments with bells and drum, puzzles, peg boards, geometric templates (circle, square, and triangle), balloons, finger paints, beads, burlap and needles, clay, work bench, sewing and lacing board, and other things. During 1970-71, a dozen small games and puzzles were purchased for each classroom, with more small tools and physical education games.

Swimming for Priority I Children

Planned for by the sensorimotor specialists, a swim program was provided for the third year, by ECE for the children in the 7 Priority I centers. About 480 children had two "splash and learn" swim-times at the Fifth Street YMCA, with the assistance of 3 water safety instructors from the American Red Cross. The American Red Cross Beginner Skill Program was the guide used.

Local and National Recognition

In April, a local television station featured a half-hour Sunday noon presentation with a film plus demonstration with children of sensorimotor skills.

For the Detroit National Convention of the American Association of Health, Physical Education, and Recreation in February, the staff was asked to provide a display of the sensorimotor materials used in the Dayton Early Childhood Education Program.

In November, the special services consultant presented the results of the longitudinal research project to the Regional Symposium on Perceptual Motor Training, held in Cincinnati.

The film, "Sensorimotor Training", which had been developed during 1967-68 school year, was shown at the White House Conference for Elementary Children, held in Washington, D.C. in February. A list of other showings of this film may be found in the Appendix.

World of One's Own!
(The Roll-a-sphere)

ANALYSIS OF SENSORIMOTOR DEVELOPMENT IN ECE CENTERS

As Measured by the Sensorimotor Awareness Survey, Pre-test to Posttest
1970-71

Individual testing of children in all Early Childhood Education centers by the team of sensorimotor consultants secured pre-test and posttest scores on the Sensorimotor Awareness Survey for a total of 559 children in all the centers.

Average age of children in the centers ranged from 51.4 months to 55.8 months at the time of the pre-test. That there is an overall effect of maturation on sensorimotor development can be noted by studying the pre-test scores in the following table. The mean pre-test score for children who were 54 months or older at the beginning of the 1970-71 school year was higher than the mean scores for the two younger groups of children.

That the ECE Program had an interacting effect can be noted by comparing Group I's posttest mean score with Group III's pre-test mean score. It is interesting that the two younger groups had a higher mean number of change points than the older children.

TABLE 1
MEAN SCORES OF AGE LEVEL GROUPS, PRE-TEST AND POSTTEST SCORES OF SENSORIMOTOR AWARENESS SURVEY

	Pre-Test		Posttest		
Group	Age Range in Months	Mean Score	Age Range in Months	Mean Score	Mean Number of Change Points
I	48-50	22.3	55-57	32.5	10.8
II	51-53	24.5	58-60	34.2	9.8
III	54-56	27.3	61-63	35.6	8.6
IV	57-59	27.1	64-67	35.3	8.7

In succeeding tables, teachers and program consultants can determine the relative progress of a center for the survey as a whole and for the items within the measure. For each center, strengths and weakness in the sensorimotor program may be assessed and more time given to areas where there appears to be some lack.

TABLE 2

PROFILE OF FACTORS RELATING TO SENSORIMOTOR ACHIEVEMENT IN EARLY CHILDHOOD EDUCATION CENTERS, 1970-71

ECE Center	Number Tested	Age in Months at Beginning of Year			Days Attendance During 1970-71			SENSORIMOTOR SURVEY								
								Pre-test			Posttest			Change Points		
		Center	Mean Age	Rank	Center	Mean No.	Rank	Center	Mean Score	Rank	Center	Mean Score	Rank	Center	Mean No.	Rank
A Greene	4	Y	55.8	1	V	132.1	1	A	27.9	1	D	37.1	1*	U+	12.0	1
B Westwood	41	K	55.7	2	X+	130.4	2	B	27.8	2	M	37.0	2*	M	11.2	2
C +MacFarlane	24	T	55.7	2	W+	129.5	3	C+	27.7	3	B	36.8	3	T	11.1	3
D Highview	26	Q	55.6	4	B	125.2	4	D	27.5	4	K	36.1	4*	Z+	10.9	4
E Weaver	25	M	55.4	5	K	124.1	5	E	27.2	5	P	35.6	5*	X+	10.5	5
F McNary	18	D	55.3	6	D	123.2	6	F	27.1	6	F	35.3	6	K	10.2	6
G +Irving	13	X+	55.3	7	M	122.2	7	G+	26.7	7	T	35.3	6*	Q	10.1	7
H Franklin	21	N+	55.2	8	A	121.8	8	H	26.4	8	G+	35.2	8	Y	9.9	8
I Jackson Pri	61	F	55.1	9	E	121.1	9	I	26.2	9	A	35.1	9	P	9.5	9
J Van Cleve	26	G+	55.0	10	C+	120.6	10	J	26.1	10	E	35.1	9	L	9.3	10
		P	55.0	10							L	35.1	9			
K Jane Addams	13				N+	119.9	11	K	25.9	11				D	9.2	11
L Whittier	24	S	54.9	12	F	119.7	12	L	25.9	11	U+	34.7	12*	R	9.1	12
M Wogaman	22	J	54.8	13	L	119.0	13	M	25.4	13	I	34.6	13	B	9.0	13
N +Edison	9	C+	54.7	14	O	118.9	14	N+	25.3	14	Q	34.6	13*	V	8.8	14
O Washington	30	B	54.5	15	G+	118.8	15	O	25.2	15	J	34.3	15	G+	8.5	15
														N+	8.5	15
P Patterson	22	I	54.4	16	R	118.7	16	P	25.1	16	N+	33.8	16			
Q Longfellow	18	A	54.3	17	J	118.3	17	Q	24.6	17	C+	33.7	17	I	8.4	17
R Gardendale	27	U+	54.2	18	S	117.5	18	R	24.2	18	R	33.4	18	S	8.4	17
S Huffman	15	V	54.2	18	I	117.3	19	S	24.2	18	X+	33.4	18*	F	8.2	19
T Ruskin	14	Z+	53.9	20	U+	113.7	20	T	24.1	20	Z+	33.1	20*	W+	8.1	20
U +Louise Troy	22							U+	24.1	20						
		O	53.3	21	Y	112.9	21				S	33.0	21	E	8.0	21
V Drexel	25	L	53.3	21	P	111.3	22	V	24.0	22	O	32.8	22	J	8.0	21
W +Child.Serv.	4	W+	52.3	23	H	110.1	23	W+	23.3	23	V	32.8	22	O	7.3	23
X +McGuffey	23	H	52.1	24	T	109.4	24	X+	22.9	24	H	32.4	24	A	7.3	24
Y Hawthorne	11	E	51.5	25	Z+	108.0	25	Y	22.0	25	Y	32.4	24	C+	6.0	25
Z +Emerson	21	R	51.4	26	Q	106.4	26	Z+	21.6	26	W+	31.4	26	H	5.9	26
ECE	559	ECE	54.4		ECE	118.4		ECE	25.5		ECE	34.5		ECE	9.0	

+ Priority I Centers, with additional service from sensorimotor consultants

* Gained 3 or more places in rank among the centers between pre-test and posttest

In Table 2, the centers are ranked by average age at the pre-test, by average attendance, by pre-test mean score, by posttest mean score, and by mean difference achieved between pre-test and posttest. Centers are identified by letters of the alphabet according to pre-test score ranks, a device which thoroughly scrambles the alphabetical list of centers. This focuses attention on the variation of sensorimotor achievement within the program, as measured by the locally developed instrument, Sensorimotor Awareness Survey. (See Appendix.) Sensorimotor specialists and program supervisors were given the key for decoding so that, as they conferred with the staff at a center, they could point out the center's relative achievement in sensorimotor development. A copy of the center's profile, with a hand-drawn line to indicate the changes in rank, was given to each teacher for her own evaluation and to determine the need for more concentrated attention to any part of the sensorimotor program. Each teacher also received copies of the other tables showing progress of the centers in specific items of the measure from pre-test to posttest.

In studying the data in Table 2, the question arises as to which pairing of ranks may be related to each other. Spearman's Rank Order Correlation Test was used as a quick way to determine this. As indicated in Table 3 below, the most significant pair of rankings was that of pre-test mean scores and posttest mean scores with a Spearman rho, or correlation, of .60. The t-value of this correlation was 3.6742, indicating that the relationship could be due to chance in only 5 cases out of 100. The next most significant relationship found was between the rankings of the mean number of change points and those of the posttest scores, although the rho of .36 was not significant at the .05 level.

TABLE 3
RELATIONSHIP OF PAIRS OF FACTORS IN SENSORIMOTOR ACHIEVEMENT

Pairs of Ranking Order Tested	rho correlation	t-value	Comment
Pre-test Mean Score, Posttest Mean Score	.60	3.6742	Significant at .05
Pre-test Mean Score, Mean Age in Months	.08	0.3935	Not significant
Posttest Mean Score, Mean Days Attendance	.17	0.8455	Not significant
Mean No. of Change Points, Attendance	-.17	-0.8455	Not significant
Mean No. Change Points, Posttest Mean Score	.36	1.8907	Significant at .10

It is interesting to follow the profiles of different centers with attention to the age factor. Center Y, with the highest average age, made a better-than-average gain in change points between pre-test and posttest, but held a low rank position among the centers; Y had a lower-than-average attendance. In contrast, center K, which also had a high average age began with a pre-test mean score slightly above average and achieved a posttest score which ranked 4 among the 26 centers; attendance for the group tested was well above the mean attendance figure for all children tested in the program. However, center T, which had the same mean age as center K, had a far lower attendance rate and yet managed to move ahead 14 places in rank on the posttest, a rather extraordinary feat considering the attendance pattern. None of these three centers had the advantage of the extra visits of the sensorimotor consultants.

This question needs to be considered: "Did the greater input of attention to Priority I centers result in greater gains for those centers?" While centers U, Z, and X, did achieve among the highest average number of change points between pre-test and posttest, causing them to move ahead 10, 5, and 6 places in rank order on the posttest, three other centers (G, N, and W) maintained about the same position on the posttest that they had on the pre-test, while center C made a low average gain of only 6 change points, falling from rank 3 on the pre-test to rank 17 on the posttest.

In achieving higher rank on the posttest, centers D, M, and K went ahead 3, 11, and 7 places, respectively, on the posttest, with a higher-than-average attendance, while three other centers (P, T, and Q) went ahead 9, 14, and 4 places, respectively, with lower-than-average attendance. Similar comparisons could be pointed out for descent in rank. This adds support to the results of the Spearman test that the rankings of attendance did not relate to the posttest rankings significantly.

Item Analysis

A further breakdown in the overall sensorimotor progress is shown in Tables 4-10 which provide an item analysis of the improvement of the 26 ECE centers between pre-test and posttest of the Sensorimotor Awareness Survey administered twice in 1970-71. These pages were prepared specifically for the sensorimotor staff consultants whose responsibility it is to visit the ECE centers and work with the teachers in improving the program. The coordinator of educational program evaluation attended a service meeting with these persons and the ECE coordinator of special services in early September to explain the results.

Part 1 of the Item Profile (Table 4) shows pre- and post mean scores and the change points in mean score, each in rank order among the 26 centers of the Body Image section of the Sensorimotor Awareness Survey. Centers B and F held first and second place, respectively, on each testing of Body Image, but the greatest increase in change points occurred for centers Y and L which ranked 22 and 23, respectively, on the pre-test, and 7 and 19 on the posttest. Of the 7 Priority I centers which had received additional service from the sensorimotor consultants and the opportunity for such expanded services as the swim program (see page 4), the 3 centers making the greatest gains were U, G,& W.

Part 2 of the Item Profile (Table 5) gives similar information for knowledge of Space and Directions. Three of the Priority 1 centers (Z, G, and U) led in the mean number of change points. This section had 10 items with 1/2 point score for each item, or a total of 5 points possible for the section.

The focus of Tables 6, 7, and 8, is on the degree of mastery of the children at each center in terms of the SENSORIMOTOR SKILLS portions of the test and of Form Perception. The groupings of the centers on the posttest for each item may be visually contrasted with the groupings on the pre-test to see the progress for the ECE Children during the program year. That some of the growth is due to the ECE training in sensorimotor activities and not simply to maturation may be inferred from reference to Table 1 on page 6.

The two final tables (9 and 10) are simply summaries of Tables 6, 7, and 8, with the number of centers given for each mastery level, rather than an identification of the centers by letter. This grouping of the number of centers by mastery level is indicative of the relative difficulty of the various items for pre-kindergarten children, skipping, for example, being indicated as one of the more difficult sensorimotor skills on the survey, and form perception of the circle being apparently more readily acquired by this age than that of the square or circle.

On any table, to aid in an analysis of the sensorimotor program for a particular center, a profile line could be drawn to connect the ranking or the mastery level for that center. Reference to Table 1 supports the hypothesis that the highest correlation of factors is between the scores on the pre-test with those on the posttest, but the difference not accounted for in this relationship must somehow be accounted for by the sensorimotor instructional program as carried out in the center. A center staff who note a decided loss in rank between pre-test and posttest on a particular item may conclude that a somewhat greater emphasis upon activities dealing with certain kinds of information or certain skills should be made in their center's sensorimotor program. (See APPENDIX C for Center Performance Notes.)

Validity

That the survey itself involved such a large number of children in pre- and post-testing by trained sensorimotor consultants working as teams to administer the test lends a high degree of validity to the overall results and to the item analysis.

Implications

A plan for more individualization of sensorimotor activities could be worked out in each center, perhaps using a criterion checklist to note mastery of each type of sensorimotor skill and of information recommended for emphasis with pre-kindergarten children. Since the pre-test of the Sensorimotor Awareness Survey revealed a high percentage of children who began the year with a high level of mastery in various facets of sensorimotor knowledge and skills, individualization would have merit.

TABLE 4

ITEM PROFILE OF SENSORIMOTOR AWARENESS SURVEY, EARLY CHILDHOOD EDUCATION PROGRAM, 1970-71

Part 1. Body Image: Total items -- 18; Total Score Possible -- 9

Pre-test			Posttest			Change Points			Average Number of Terms Gained During 1970-71
ECE Center	Mean Score	Rank	Center	Mean Score	Rank	Center	Mean Score	Rank	
B Westwood	8.28	1	B	8.78	1	Y	1.68	1	3.3
F McNary	7.81	2	F	8.17	2	L	1.35	2	2.7
M Wogaman	7.68	3	Q	8.17	2*	U+	1.20	3	2.4
D Highview	7.67	4	T	8.11	4*	G+	1.20	3	2.4
J Van Cleve	7.50	5	V	8.06	5*	V	1.18	5	2.3
H Franklin	7.26	6	U+	8.02	6*	W+	1.12	6	2.3
S Huffman	7.20	7	D	8.00	7	T	1.04	7	2.1
Q Longfellow	7.17	8	G+	8.00	7*	Q	1.00	8	2.0
I Jackson	7.16	9	Y	8.00	7*	R	0.93	9	1.8
P Patterson	7.11	10	M	7.98	10	P	0.77	10	1.5
T Ruskin	7.06	11	P	7.89	11	K	0.77	10	1.5
O Washington	7.02	12	R	7.85	12*	Z+	0.73	12	1.5
E Weaver	7.00	13	S	7.80	13	E	0.72	13	1.4
A Greene	7.00	13	H	7.74	14	C+	0.69	14	1.4
N+ Edison	6.94	15	E	7.72	15	O	0.63	15	1.3
R Gardendale	6.93	16	J	7.71	16	N+	0.61	16	1.2
V Drexel	6.88	17	I	7.65	17	S	0.60	17	1.2
G+ Irving	6.85	18	O	7.65	17	B	0.50	18	1.0
U+ Louise Troy	6.82	19	L	7.63	19*	I	0.50	18	1.0
K Jane Addams	6.65	20	N+	7.56	20	H	0.48	20	1.0
Z+ Emerson	6.64	21	K	7.42	21	X+	0.44	21	0.9
Y Hawthorne	6.32	22	A	7.38	22	F	0.42	22	0.8
L Whittier	6.27	23	Z+	7.34	23	A	0.38	23	0.8
X+ McGuffey	6.26	24	X+	7.13	24	D	0.33	24	0.7
W+ Child.Serv.	6.00	25	W+	7.12	25	M	0.30	25	0.6
C+ MacFarlane	5.35	26	C+	6.04	26	J	0.21	26	0.4
ECE Average	7.05			7.77			0.72		1.4

+ Priority 1 Centers with additional service from sensorimotor consultants

* Gained 3 or more places in rank among centers between pre-test and posttest

TABLE 5

PROGRESS IN KNOWLEDGE OF SPACE AND DIRECTIONS, PRE-TEST TO POSTTEST OF SENSORIMOTOR AWARENESS SURVEY, 1970-71
Part 2.

Pre-test			Posttest			Change Points			Increase in Items Known
Center	Mean Score	Rank	Center	Mean Score	Rank	Center	Mean Number	Rank	Mean Number
J	4.10	1	M	4.80	1	Z+	1.12	1	2.2
M	4.00	2	U+	4.66	2*	G+	1.09	2	2.2
V	3.92	3	F	4.64	3*	U+	1.07	3	2.1
A	3.88	4	Y	4.59	4*	S	1.07	4	2.1
H	3.86	5	O	4.53	5*	R	0.96	5	1.9
F	3.83	6	C+	4.44	6*	Y	0.95	6	1.9
B	3.83	6	D	4.40	7*	K	0.88	7	1.8
P	3.73	8	S	4.40	7*	O	0.86	8	1.7
T	3.71	9	B	4.37	9	C+	0.85	9	1.7
O	3.70	10	R	4.33	10*	F	0.81	10	1.6
Y	3.64	11	P	4.32	11	M	0.80	11	1.6
D	3.63	12	V	4.28	12	E	0.80	12	1.6
U+	3.59	13	H	4.26	13	D	0.77	13	1.5
C+	3.58	14	Z+	4.26	13*	I	0.77	14	1.5
L	3.54	15	J	4.23	15	X+	0.76	15	1.5
I	3.38	16	K	4.23	15	Q	0.67	16	1.3
R	3.37	17	G+	4.16	17*	P	0.59	17	1.2
K	3.35	18	I	4.15	18	B	0.54	18	1.1
S	3.33	19	T	4.07	19	L	0.40	19	0.8
X+	3.33	19	X+	4.04	20	H	0.38	20	0.7
W+	3.25	21	A	4.00	21	V	0.36	21	0.5
Q	3.22	22	E	4.00	22	T	0.36	21	0.5
E	3.20	23	L	3.94	23	W+	0.25	23	0.5
Z+	3.10	24	Q	3.89	24	J	0.21	24	0.4
G+	3.07	25	W+	3.50	25	A	0.13	25	0.3
ECE Mean	3.57			4.27			0.70		1.4

+ Priority 1 Centers, with additional service from sensorimotor consultants

* Gained 3 or more places in rank among the centers between pre-test and posttest

TABLE 6

PROGRESS IN MASTERY OF SENSORIMOTOR SKILLS USING LARGE MUSCLES, PRE-TEST TO POSTTEST OF SENSORIMOTOR AWARENESS SURVEY Part 3.

Level of Mastery	Balance				Jumping 2 feet forward, feet together		Hopping		Skipping	
	Standing on tiptoes		Standing on 1 foot							
	Pre-test	Posttest	Pre-test	Posttest	Pre-test	Posttest	Pre-test	Posttest	Pre-test	Posttest
100%	K V A D S Q J	K W+ V N+ Z+ H A Y D Q C+ X+ F P T U+ J O B M			W+ N+ A Y C+ U+ O M	K W+ V N+ Z+ R A Y D G+ C+ X+ F T U+ J O E L M				
90-99%	N+ H G+ I C+ P U+ O E L M	R S G+ I E L			V H D I Q X+ P J B L	H S I Q P B				L
80-89%	Z+ R Y X+ F T B			K D T M	K Z+ R S F T E		E A	K W+ D I U+ E L M		N+ U+ B
70-79%	W+			W+ N+ Z+ A G+ Q F U+ J O E B L	G+			R G+ C+ Q F T B A		A D X+
50-69%			D F	V H R S I C+ X+ P			K D I C+ F B M	V N+ Z+ H Y S X+ P J O	A D G+	K Z+ R G+ I Q C+ F T E M
30-49%			K W+ V N+ Z+ H R Y S G+ I Q C+ T U+ J O E B L M	Y			N+ Z+ R Y G+ Q X+ T U+ O L		K R I F E B L M N+	V H S P J O
Below 30%			A X+ P				W+ V H S P J		W+ V Z+ H Y S Q C+ X+ P T U+ J O	W+ Y
ECE Mastery Level Average	93%	98%	40%	70%	92%	98%	43%	74%	30%	61%

+ Priority I Centers, with additional service from sensorimotor consultants

TABLE 7

PROGRESS IN MASTERY OF SENSORIMOTOR SKILLS OF COORDINATION, FINE MUSCLE CONTROL. AND HEARING DISCRIMINATION

PRE-TEST TO POSTTEST OF SENSORIMOTOR AWARENESS SURVEY, 1970-71 Part 4.

Level of Mastery	Eye-Foot Coordination: Cross-over step on line		Fine Muscle Control: Paper Crumpling		Hearing Discrimination			
					Even Beat		Staccato Beat	
	Pre-test	Posttest	Pre-test	Posttest	Pre-test	Posttest	Pre-test	Posttest
100%					A	A		A
90-99%		K D G+ J						
80-89%		C+ F P O E L M				H P O E		
70-79%		V Z+ H R A Y S I T U+ B		C+ F P U+ M	W+	K S Q U+ B M		V S Q F U+
50-69%	H C+	W+ N+ Q X+	W+	K W+ V Z+ H R A Y D G+ I Q X+ T J O E B	L	W+ V N+ Z+ R Y D G+ I C+ X+ F J L	K W+ A C+	W+ Z+ G+ I C+ P J E B L M D
30-49% 30-49%	K V Z+ R Y D I X+ F P J E B		K V N+ Z+ H R Y D S G+ I C+ F P T J O E B L M	N+ S L	K V H R Y D G+ I Q C+ U+ J O B		N+ Z+ R D G+ I Q U+ . J O B L M	K H A Y X+ T O
Under 30%	W+ N+ A S G+ Q T U+ O L M		A U+		N+ Z+ S X+ F P T E M		V H Y S X+ F P T E	
ECE Mastery Level Average	34%	79%	42%	65%	33%	79%	33%	65%

+ Priority 1 Centers

TABLE 8

PROGRESS IN MASTERY OF FORM PERCEPTION, PRE-TEST TO POSTTEST OF SENSORIMOTOR AWARENESS SURVEY, 1970-71

Part 5.

Level of Mastery	Matching		Pointing to Circle		Pointing to Square		Pointing to Triangle	
	Pre-Test	Posttest	Pre-Test	Posttest	Pre-Test	Posttest	Pre-Test	Posttest
100%	W+ N+ A	W+ V N+ Z+ H A D X+ T U+ E M	N+	K W+ V N+ Z+ H D S E M		N+ D		N+ A D Q P
90-99%	V D X+ F P U+	R Y S G+ I Q F P J O L		R Y G+ I Q C+ X+ F P U+ J O B L		K H Y I Q P B L M		K H Y S B L M
80-89%	H G+ Q E B L M	B	V S J O E			S X+ F U+ J		I X+ F U+ J
70-79%	Z+ R Y S I T O		W+ H R C+ X+ P B	A		V Z+ R G+ E	A	V Z+ R G+ E
50-69%	K C+ J	K C+	K Z+ A Y D G+ I Q F U+ M		W+ N+ A S C+ J O E	W+ A C+ O	W+ N+ S C+ J O E	W+ C+ O
30-49%			T L	T	K H R D Q F P	T	K H R D I Q F P	T
Under 30%					V Z+ Y G+ I X+ T U+ B L M		V Z+ Y G+ X+ T U+ B L M	
ECE Mastery Level Average	83%	94%	63%	95%	32%	81%	32%	79%

+ Priority 1 Centers

TABLE 9

PROGRESS OF ECE CENTERS IN SENSORIMOTOR FORM PERCEPTION AND HEARING DISCRIMINATION, SENSORIMOTOR AWARENESS SURVEY, 1970-71 (Summary of Table 8 and Part of Table 7)

LEVEL OF MASTERY	NUMBER OF CENTERS ON EACH ACHIEVEMENT LEVEL											
	Form Perception								Hearing Discrimination			
	Matching Shapes		Pointing: Circle		Pointing: Square		Pointing:Triangle		Even Beat		Staccato Beat	
	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post
100%	3	12	1	10		2		4	1	1		1
90-99%	6	11		14		9		8				
80-89%	7	1	6			5		5		4		
70-79%	7		7	1		5		5	1	6		5
50-69%	3	2	11		8	4	7	4	1	14	4	12
30-49%			1	1	7	1	10		14		13	7
Under 30%					11		9		9	1	9	1
ECE Mastery Level	83%	94%	63%	95%	32%	81%	32%	79%	33%	79%	33%	65%

TABLE 10

PROGRESS OF ECE CENTERS IN SENSORIMOTOR SKILLS, BASED ON ITEM ANALYSIS OF SENSORIMOTOR AWARENESS SURVEY, 1970-71
(Summary of Table 6 and Part of Table 7)

LEVEL OF MASTERY	NUMBER OF CENTERS ON EACH ACHIEVEMENT LEVEL													
	Standing on tip-toes, eyes open, 8 seconds		Standing on one foot, eyes shut, 5 seconds		Jumping 2 feet forward, feet together		Hopping on one foot, in place		Skipping about 30 feet		Cross-over step on line for 8 feet		Fine Muscle Control: Crumpling paper	
	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post	Pre-	Post
100%	7	20			8	20								
90-99%	11	6			10	6				1		4		
80-89%	7			4	7		2	8		3		7		
70-79%	1			13	1			8		3		11		5
50-69%			2	8			7	10	3	11	2	4	1	18
30-49%			21	1			11		9	6	13		23	3
Under 30%			3				6		14	2	11		2	
ECE Mastery Level	93%	98%	40%	70%	92%	98%	43%	74%	30%	61%	34%	79%	42%	65%

APPENDIX

Showings of Film: "Sensorimotor Training", 1970-71 School Year

Presentations at Major Conferences and Workshops:

Workshop for EMR Teachers, Columbus, Ohio
EPDA Institute for Special Education Teachers of Northeast Ohio
NOETA Conference, Ashland, Ohio
Workshop for Head Start Teachers - Kenowah County - West Virginia
White House Conference, Washington, D.C.
Regional Perceptual Motor Symposium - Cincinnati, Ohio
EPDA Institute - Pikeville College - Pikeville, Kentucky
Early Childhood Workshop - Charleston, West Virginia
Multi-Sensory Workshop - Xavier University

School Systems and Colleges Requesting Film for Clinics and Workshops

Wayne Township Schools - Montgomery County, Ohio
Mad River School System - Montgomery County, Ohio
Centerville School System - Montgomery County, Ohio
Ohio Northern University
University of Dayton
Huber Heights Nursery School Mother's Association - Dayton
Illinois State University
Macalaster College
University of Alabama
Title III Project - Ocala, Florida
Hofstra University
Philadelphia Public School System
Cortland State University
San Jose State
Wisconsin State University - LaCrosse
Parkersburg, West Virginia Schools
Arkansas State University
School District No. 60, Pueblo, Colorado
Castleton State College, Vermont
State University of New York at New Paltz
Mansfield, Ohio City Schools
Michigan State University
University of South Dakota
University of Missouri
Northwest Missouri State College
University of Western Ontario

SENSORY MOTOR AWARENESS SURVEY FOR 4 AND 5 YEAR OLDS

Date of Test_________

Name_______________________ Sex________ Birth_______________ Center_______________

Body Image. ½ point for each correct part; 9 points possible.

_____ 1. Ask the child to touch the following body parts:

head______
toes______
eyes______
wrists____
back______
ankles______
nose________
feet________
chest_______
elbows______
ears______
legs______
mouth_____
fingers___
stomach______
chin_________
waist________
shoulders____

Space and Directions. ½ point for each correct direction; 5 points possible.

_____ 2. Ask the child to point to the following directions:

front_____ back_____ up_____down_____ beside you_____

Place two blocks on a table about one inch apart. Ask the child to point:

under_____ over_____ to the top_____to the bottom_______
between______

Balance. Score 2 points if accomplished.

_____ 3. Have the child stand on tiptoes, on both feet, with eyes open for eight seconds.

Balance and Laterality. Score 2 points for each foot; 4 points possible.

_____ 4. Have the child stand on one foot, eyes closed, for 5 seconds. Alternate feet.

Laterality. Score 2 points if the child keeps his feet together and does not lead off with one foot.

_____ 5. Have the child jump forward on two feet.

Rhythm and Neuromuscular Control. Score 2 points for each foot if accomplished six times; 4 points possible.

_____ 6. Have the child hop on one foot. Hop in place.

Rhythm and Neuromuscular control. Score 2 points.

_____ 7. Have the child skip forward. Child must be able to sustain this motion around the room or for approximately 30 feet.

Integration of Right and Left Sides of the Body. Score 2 points if cross patterning is evident, for each.

_____ 8. Have the child creep forward.

_____ 9. Have the child creep backwards.

Eye-Foot Coordination. Score 2 points if done the length of tape or mark.

_____ 10. Use an eight-foot tape or chalk mark on the floor. The child walks in a cross-over step the length of the tape or mark.

Fine Muscle Control. Score 2 points if paper is completely crumpled.
Score 1 point if paper is partially crumpled.
Score 0 points if child needs assistance or changes hands.

_____ 11. Using a half sheet of newspaper, the child picks up the paper with one hand and puts the other hand behind his back. He then attempts to crumple the paper in his hand. He may not use his other hand, the table, or his body for assistance.

Form Perception. Score 1 point for each correct match.

_____ 12. Using a piece of paper with two inch circles, squares and triangles, ask the child to point to two objects that are the same.

Form Perception. Score 1 point if circle is identified correctly.
Score 2 points if the triangle and square are identified correctly.

_____ 13. Ask the child to identify by saying, "Point to the circle."
_____ "Point to the square."
_____ "Point to the triangle."

Hearing Discrimination. Score 1 point if the child taps correctly each time.

_____ 14. Ask the child to turn his back to you. Tap the table with a stick three times. Ask the child to turn around and tap the sticks the same way.

_____ Ask the child to turn his back to you. Tap the table again with the sticks (two quick taps, pause, the two more quick taps.) Have the child turn back to you and tap out the rhythm.

Eye-Hand Coordination. Score one point for each successful completion.

_____ 15. A board is used with three holes in it. The holes are 3/4, 5/8, and 1/2 inches in diameter. The child is asked to put his finger through the holes without touching the sides.

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3 Don S. Glines: Implementing More and Better Schools. Mankato, Minnesota: Mankato Press.

4 Claire Clifford, and William Wattenburg: Relationship of the Self-Concept to Beginning Reading Achievement. Detroit, Michigan: Wayne State University.

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NEW VISIONS

an art museum for children

longfellow school
salem and superior avenues
dayton, ohio

resumé 1970-71
and
summer 1971

new visions is more than a visual experience. it was designed for children and its unique quality is that it approaches awareness of art and the world around through all the senses. it is not intended as an end in itself but as a means of opening doors during the early years.

RESUME:

NEW VISIONS MUSEUM

A Component of EARLY CHILDHOOD EDUCATION PROGRAM
ESEA Title I, FY 1971

Division of Research
MANAGEMENT SERVICES DEPARTMENT

DAYTON PUBLIC SCHOOLS
348 West First Street
Dayton, Ohio 45402

Wayne Carle, Superintendent

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PART I: THE MUSEUM IN OPERATION

NEW VISIONS, an art museum designed for children, continued operations for its fifth year at Longfellow School from September 8, 1970, to June 10, 1971, as a component of the Early Childhood Education Program, the major ESEA Title I project of the Dayton Public Schools.

The primary purpose of the NEW VISIONS Museum was to provide planned visual and other sensory learning experiences for children who came to visit from the 26 pre-kindergarten centers of the economically disadvantaged target area. In the museum, they could explore the artifacts of our present society and those of past and different cultures. Through the use of varied approaches in stimulating children's five senses, the children's awareness of themselves, of their environment, and of their heritage was increased.

Entering NEW VISIONS

Entering from the vaulted hallway in the basement of one of the oldest schools of the city, the children saw a large, colorful bulletin board of pictures of children using their five senses. Designed to make the entry more appealing, this visual impact was useful as an introduction to the sensory activities the children would experience on their tour of the museum.

A small gallery of Dayton school children's art work continued to be of special interest to visiting classes. It served as a stimulant to both children and their teachers for enlarging the range of art activities in their classrooms and for providing a stimulus to assure additional art work contributions for the gallery.

From the moment of entering the museum, the children were confronted by a colorful new world of art to which they responded with joy, wonder, absorbing interest, and talk. From home to classroom to museum--two big steps for little people!

Exhibits: Ramp Area

A gradually rising ramp area began near one corner, continued along one long side of the room, and curved around the far corner, with wall hangings, pictures, and objects displayed on a child scale on both sides of the ramp. Every effort was made to encourage the use of the senses in exploring the exhibit. Under the continuing guidance of the museum docents and the cooperating teachers who came with the children, the children themselves were urged to explore freely through the exhibit, to think and to find out the answers to their own questions.

The free exploration period was followed by a group discussion, with everyone seated on the floor in a loose semicircle. No formal presentation of artifacts per se was made by the docents; instead, the discussion centered on those artifacts about which the children themselves expressed the most curiosity. As the children were encouraged to ask questions and discuss items of interest, they made further discoveries which they shared with the group.

Experiencing success and recognition by their discoveries and enriching their vocabulary through their museum experiences were a part of the conscious, but informal, plan of the docents. Age, maturity, and interests of each group determined the depth of involvement in these discovery sessions and the length of time spent in the area.

Appalachian/Southern Highlands Exhibit

Many of the migrants to the inner city come from the Appalachian, or Southern Highlands, area which was the theme of one of the major exhibits during 1970-71. In the ramp area of the museum, this exhibit consisted of items from the past and the present, crafts from the Appalachian/Southern Highlands and contemporary sculpture, textiles, ceramics, and prints. Authentic recordings featuring the three-stringed dulcimer provided a related background of sound, as the children moved along the ramp touching a colorful quilt or picking up a cornhusk doll or examining a strange-looking tool.

Discoveries concerning the imaginative use of familiar materials always appealed to each group of children. To cite a few examples: the use of wood from trees for the woodcarving of a squirrel or duck; to build furniture, as the three-legged stool; and for the handles of tools; and the varied use of cornhusks for mats, chair seats, and dolls.

During the discussion period, children were guided into dialogue concernsome basic ideas about the early Appalachian culture:

(1) The people utilized all available natural materials for basic needs.

(2) Their crafts reflect a high aesthetic quality, with each craftsman using his or her own ideas in the making.

The children's favorite activities were wearing sun bonnets and aprons, ringing and comparing sounds of bells, and grinding coffee beans in the coffee grinder.

Sensory Experience in the Maze Area

Separated from the ramp area of the museum by 6-foot high screens, the maze area provided children with many new experiences in hearing, touching, smelling, tasting, and seeing. The children were introduced to the maze area by a repeat of the intimate semicircle, as everyone sat on floor cushions examining objects which illustrated each of the senses.

Efforts were made by the docents to draw out the timid and insecure child, to enlarge his feeling of accomplishment, and to heighten his awareness in many areas. Many times, to the surprise and delight of the observing classroom teachers, the docents were able to establish a rapport and response from children who had been reluctant to participate in classroom activities. A conscious effort was made to speak to children on their level and to ensure success in all the experiences the children had at the museum. With the guidance of the docents, but without actual interference, the children were given free time to explore the maze area, to pick up and handle and explore the objects found there. There were no "Do not touch" signs or verbal admonitions in the NEW VISIONS Museum.

To correlate the ramp area and the maze area, many of the sensory experiences were directly related to the exhibit: weavings, weedbags, tops and other wooden toys, and handcrafted items from the Appalachian/Southern Highlands area. There was a three-way mirror in which girls could see themselves wearing a sun bonnet and apron. Psychedelic glasses could multiply what the observer saw. Children could experiment with kaleidoscopes, magnifying glasses xylophones, and colored plastic rectangles which could be overlapped to produce new colors. They could actually walk into an 8-foot cube covered completely inside with mirrors reflecting their myriad selves in colored lights.

The final part of each visit was a puppet show featuring "Jed, Mountain Boy" who talked with his animal friends as they illustrated the use of their five senses. The puppets' conversation induced the children to become part of the talk show as they reviewed their use of the five senses.

NEW VISIONS Tours

Bus tours to the museum for pre-kindergarten children were scheduled by the Early Childhood Education office to begin in November, 1970, and to continue through April, 1971.

Prior to the children's tours, parent tours were scheduled in October and November, 1970, and in January and May, 1971. As parent groups participated in the activities of NEW VISIONS and listened to the explanation by the docents of the aims and approaches used with young children, they gained a realization of the value and the necessity of developing sensory awareness in their own children. The common experiences in the museum provided interesting topics of conversation at home.

Visits by the Docents to ECE Centers

During 1970-71, the docents initiated a program designed to reinforce the learning experiences provided during the children's tours of the museum. The docents themselves visited the 35 classrooms in the 26 ECE centers, providing related activities for the children. A total of 71 visits was made.

A class who visited the museum on Tuesday had the docents come to their center on Wednesday. A similar schedule was followed for Thursday and Friday.

Immediately following each class tour of NEW VISIONS, a record was made of the children's activities and interests during the tour. Artifacts were selected from the exhibit to provide different experiences for the visit to the class the following day, making the class visit individually planned. This enabled the docents to concentrate on areas of learning that either reinforced or enhanced the children's experiences of the museum tour.

A number of ECE teachers were quite innovative in the follow-up visit.

One teacher selected the making of applesauce as a group experience for the children with the highly satisfactory culmination of eating the applesauce as the daily snack. The puppets, of course, came along for every class visit.

Items which were nearly always included in the general program presented at the ECE centers included a selection from the following:

sun bonnet and apron
tops
Gew-Haw Whimmy Diddles
Red Riding Hood doll
wooden dancing man on board
finger puppets
hand puppets
color paddles
Big I, little i
Visi-Tune Hurdy Gurdy
ceramic frog
puppet frog
beanbag frog
stuffed cotton frog
large green frog
puppets from puppet show
tape recorder, tape
puppet stage
touch box
sensory items

Items of the Appalachian/Southern Highlands exhibit taken occasionally and for special interest expressed by the children included:

coffee grinder, coffee beans
corn, cornhusk mat
cornhusk doll, corncob doll
store bell
cow bell
school bell
peddler's horn
candle mold, candles
iron, trivet
bettle boot jack
apple butter stirrer
apple dolls
wooden woman peeling apples
log
wooden bowl
wooden birds
frog print
kerosene lamp, lantern

Staff Responsibilities for NEW VISIONS

As NEW VISIONS continued to be an auxiliary unit of the Dayton Early Childhood Education Program, the coordinator of ECE had a direct responsibility for the program, particularly in arranging for the scheduling of tours by the children and for the visits made by the docents.

Although not actually a member of the NEW VISIONS staff, the art supervisor for the Dayton Public Schools served as director of the project, being responsible for its successful operation, for making purchases, and for consultation when necessary.

At the museum, two docents shared the responsibility for maintenance of the museum, for planning executing the museum program, and for the center visits. During the final month, the docents were also responsible for the packing, marketing, and cataloguing of all museum artifacts and equipment, and for moving all of these into a new location at Edison.

Program

The following features remained the same as in the previous year:

(1) Location of the museum: Longfellow School, 245 Salem Avenue, Dayton, Ohio 45406.

(2) Physical facilities of basement rooms.

(3) Assembled artifacts of different cultures.

(4) Program financed under ESEA TITLE I, with transportation for participating schools provided by TITLE I funds.

(5) Staff consisting of two docents.

(6) Use of coatroom entry.

Four aspects of the program were changed:

(1) Tours were limited to the children and parents involved in the EARLY CHILDHOOD EDUCATION Program only.

(2) Visits were made every other day to the ECE centers by the docents as a follow-up program.

(3) Dehumidifiers were installed to help control dampness of the basement area.

(4) Physical improvements made were:

Coatroom entry painted
Adequate lighting of coatroom entry
Code approved wiring for ramp lighting completed

Television Feature

NEW VISIONS was featured on a local television station, WLW-D, program, "VIBRATIONS", on February 14, 1971.

Preceding the taping of the program at the studio, a film was made in January of an actual tour of ECE children at the museum.

The docents working with ECE children at the studio, presentation of various artifacts from the museum, a discussion of the NEW VISIONS Program, and the film of an ECE tour were combined for the show, titled "EXPLORING AT NEW VISIONS."

Requests for Information and Tours

As a result of being one of 39 exemplary programs in art education described in a 1969 book[1] published by the National Art Education Association, requests have been received from many parts of the country and professional visitors have come from Maine to Minnesota, with one from York University, Canada. (See Tables 1 and 2.) An important part of dissemination of information about the NEW VISIONS Museum is an on-site visit, precisely because the museum has been developed on the basis of appeal to the senses.

Because of the nature of funding (ESEA Title I), tours to children were limited to the Early Childhood Education classes, although many requests were received from teachers of Non-ECE classes. That there has been an expressed desire of so many professional teachers both inside and outside of the city, for their classes to have the opportunity to experience NEW VISIONS is evidence of a very positive evaluation of the program offered by the NEW VISIONS Museum.

Requests were received from the following school systems:

Miami Valley Child Development Centers
Springfield Public Schools
West Carrolton Public Schools
Beavercreek Public Schools
Montgomery County Retarded Children's School

Requests for tours for college students were also received from instructors at the following schools:

University of Dayton
Miami University
Wright State University

---

[1] National Art Education Association, 1201 Sixteenth Street, N.W., Washington, D.C.: Exemplary Programs in Art Education, 1969.

Although, in the past, arrangements had been made for tours for college classes, this was not possible during 1970-71 because of the plan for the docents to make follow-up visits in the centers.

People Who Came to NEW VISIONS

A tabulation of the participants in the NEW VISIONS activities and of the other visitors who came to view the program in action is given in the Table below.

TABLE 1

PARTICIPANTS IN NEW VISIONS PROGRAM AND VISITORS, 1970-1971

Groups	Number of Groups	Number of People
Classes from Early Childhood Educations Centers	71	1,031
Parent groups from Early Childhood Education Centers	20	144
Other Visitors:		
Group from Atlanta, Georgia, compiling information for Federal program	1	6
Supervisor of student teachers from University of Dayton	1	1
Student from Yorkshire University, Canada	1	1
Michigan teachers	1	2
Members of committee studying Federal programs from Atlanta, Georgia	1	5
Members of Museum Educational Fellowship Program Toledo, Ohio, Museum of Art	1	4
Officials of Southwest Ohio Education Association	1	3
Supervisor of art, Minneapolis, Minnesota	1	1
Member of Junior League researching childrens' museums	1	1
Members of Lima Arts Council	2	2
Group from Dayton Art Institute	1	5
Art teachers and volunteers	2	2
Meeting for art teachers	1	8
Other visitors not identified with a particular group	40	40
TOTAL	136	1,258

TABLE 2

MONTH BY MONTH SUMMARY OF NEW VISIONS MUSEUM ACTIVITIES, 1970-1971

Month	Classes	Children	ECE Personnel	Parents	Visitors	TOTAL	Docents Visits to Classes	Other Museum Activities
September	0	0	0	0	6	6	0	Wiring completed. Cleaning, organizing, and assembling Appalachian/SH exhibit. Arranging artifacts exhibit at B of E and in Longfellow School Lounge.
October	0	0	15	81	3	99	0	Conference with and tour for U.D. Supervisor of Student Teachers.
November	2	37	14	46	3	100	2	
December	11	128	26	0	7	161	11	Conferences with and tours for student from Yorkshire University, Canada, and 2 teachers from Maine.
January	15	261	48	10	14	333	15	Meeting at NV with new Dayton art teachers and ass't art supervisor. Making of TV film of NV tour.
February	14	159	40	0	17	216	14	Taping of TV program. 5 visitors from Atlanta, Ga., and 4 from Museum Educational Fellowship Program of Toledo Museum of Art.
March	17	302	51	0	11	364	17	3 officials from Southwestern Ohio Education Ass'n and supervisor of Art of Minneapolis, Minnesota.
April	10	144	26	0	6	176	10	
May	0	0	0	7	20	27	1	Visitors from Beavercreek Schools, the Junior League, Lima Arts, Council, and Dayton Art Institute. Meeting with 25 ESEA Title I principals on selection of new site. Inquiry into others. Inspection of four possible new sites in schools. Disassembly of the exhibit, packing, marking and cataloguing.
June	0	0	0	0	0	0	0	Conference with coordinator of educational research and compiling of resumé of the year's activities.
TOTAL	69	1031	220	144	87	1482	70	

PART II: EVALUATION OF THE MUSEUM

The 39 ECE teachers who brought their 69 classes to visit NEW VISIONS were given a 10-statement evaluation survey to mark. Their overwhelming support of the museum as being valuable to the children and to themselves as teachers is indicated in the table below.

TABLE 3

EVALUATION BY TEACHERS OF CLASS VISITS TO NEW VISIONS, 1970-1971 (N=39)

Statements on Survey	Appalachian/Southern Highlands Exhibit		
	Excellent	Fair	Poor
1. The museum was of interest to the children.	95%	5%	0%
2. The docent presented the art objects with enthusiasm.	100%	0%	0%
3. The docent spoke in a language the children could understand.	100%	0%	0%
4. The children were encouraged to ask questions.	97%	3%	0%
5. The children were encouraged to explore on their own, at least part of the time.	97%	3%	0%
6. The museum was a learning experience for the children.	97%	3%	0%
7. The museum was a learning experience for me.	92%	8%	0%
8. The experience with the museum will carry over in other classroom experiences.	100%	0%	0%
9. The use of the five senses made the experience more meaningful.	100%	0%	0%
10. There is a need for the NEW VISIONS Program to be continued.	100%	0%	0%
AVERAGE	99%	1%	0%

Comments by ECE Teachers, Assistant Teachers, and Aides

The enthusiasm of the adults who accompanied the children to the NEW VISIONS Museum is reflected in the spontaneous comments added at the end of the survey instrument.

> "Great! Very worthwhile trip and we feel our children would benefit by another trip to NEW VISIONS with more time to be spent in the sensory room. Everything was presented in a simple, clear manner, so that even the slowest child was made a part of the experience. Any distraction was made a learning experience."

> "The docents have excellent rapport with young children -- certainly offered a meaningful experience to all of them."

> "Enjoyed the amazing creativity and artistic ability of the Appalachian culture displayed. --Warm, responsive staff members."

> "We need more than one visit per year."

> "I certainly enjoyed the visit and shared whole heartedly the enthusiasm of the docents and the children. It would be most gratifying if we could make more than just one visit. Great job. --Thanks again."

> "I am impressed at the ease in which both docents work with children. They make the museum very meaningful."

> "The museum is an attractive place that always has interesting art materials. An especially appealing factor is that the children can really touch art objects. Respect for the delicate art work is requested in a manner that is forceful enough, but doesn't dim the child's pleasure in his visit to NEW VISIONS."

> "I think this museum is one of the best things we can have for children. It is beautiful, highly informative for adults as well as children. I wish this program would be here for many, many, years."

> "Everything was so interesting and presented in such a way that they could really understand. I am sure they'll talk about it all for a long time. --They could really understand!"

> "As always the museum was just great."

> "I thought the docents did a marvelous job in their presentation -- however I did feel that perhaps some of the material was a little too advanced for 3-year-old children."

> "Keep up the good work."

> "The NEW VISIONS center affords an excellent learning situation and the experience affords a lasting impression."

> "The museum is always a delightful experience for our children."

Parent Program Evaluation

As shown in Table 2, a total of 144 parents were made aware of the purpose and objectives of NEW VISIONS in a special program designed for parents. Seven ECE parent assistants who came with the groups of parents were asked to evaluate the parent aspect of the program. The summary of their response is given in Table 4.

TABLE 4

EVALUATION BY PARENT PROGRAM ASSISTANTS OF PARENT TOURS, 1970-1971 (N=7)

Statements on Survey	Appalachian/Southern Highlands Exhibit		
	Excellent	Fair	Poor
1. The museum was of interest to the parents.	100%	0%	0%
2. The docent presented the art objects with enthusiasm.	100%	0%	0%
3. The docent spoke in a language the parents could understand.	100%	0%	0%
4. The parents were encouraged to ask questions.	100%	0%	0%
5. The parents were encouraged to explore on their own, at least part of the time.	100%	0%	0%
6. The museum was a learning experience for the parents.	100%	0%	0%
7. The museum was a learning experience for me.	100%	0%	0%
8. The use of the five senses made the experience more meaningful.	100%	0%	0%
9. There is a need for the NEW VISIONS Program to continue.	100%	0%	0%
AVERAGE	100%	0%	0%

The comments by the parent program assistants who brought parent groups to the museum support the kind of comments made by the teachers and their assistants.

> "I have visited the museum more than a dozen times and each time I find something new to me. The colors are so pleasing and the various art objects so attractive it is a pleasure just to look at them. The parents always discuss the items they have seen and consider it one of our most interesting trips. The parents are encouraged to talk to their children and to listen to them. I talk to the parents and urge them to stress the child's senses to them."
>
> "Parents received an appreciation and interest in the crafts of the Appalachians. They found it an enjoyable trip."
>
> "I have always enjoyed my visits to NEW VISIONS. Each time I have been here, there has been a different display and most interesting ones."
>
> "The parents thoroughly enjoyed their visit. The docents were "tops" in making the parents welcome, and the parents voiced the fact they would enjoy every exhibit that is shown to the children. Thank you for a wonderful afternoon.

Professional Evaluation

Besides the interest shown by professional visitors from near-by school systems and from as far away as Minneapolis, Maine, Atlanta, and Canada (Page 9), another type of professional evaluation was made through an invitation to tell the NEW VISIONS story in an academic setting.

On August 14, 1970, Jean Powell and Martha Bains presented the NEW VISIONS concept to an Ohio University class at Athens. The presentation was made with artifacts from the museum and slides of museum activities.

The class was conducted by Dr. Harry Anderson of the Ohio State Department of Education.